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6 AUGUST 1986

# USSR Report

POLITICAL AND SOCIOLOGICAL AFFAIRS

AFTERMATH OF CHERNOBYL NUCLEAR

POWER PLANT ACCIDENT

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USSR REPORT  
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## NUCLEAR PLANT FIRE

### SURVIVORS WRITE ABOUT NIGHT OF 26 APRIL

PM201020 Moscow IZVESTIYA in Russian 19 May 86 Morning Edition p 6

[Report by Andrey Illesh, special correspondent: "Front Line; IZVESTIYA Special Correspondent Andrey Illesh Reports From the Chernobyl AES Region"--capitalized passages between slantlines published in boldface]

[Text] Today all the various papers needed for work are being filled in at the Chernobyl AES and alongside it at the government commission headquarters, the vocational and technical college hostel where the engineering services have been temporarily housed, and in the offices of the party raykom which are now occupied by major nuclear physicists.... A colleague told me how a construction section foreman filled in a form for concrete and pipes virtually on his knees. I saw orders being signed for bonuses for work done in the emergency situation. This is all important but, so to speak, "secondary." The documents which I will quote in today's report are quite unusual.

They were written in hospital beds by people who were in the front line on the terrible night of 26 April.

/BY THOSE WHO WERE AMONG THE FIRST 28 TO FIGHT THE FIRE, CLEARLY AWARE OF WHAT THEY WERE GOING INTO./ But before hearing from the firemen, I will say something extremely important: Had they not extinguished the fire in reactor unit four in a short time it might have reached the other reactor. The possible consequences do not bear thinking about. They did everything. Everything they could: They saved many of us that night.

Here is what the firemen themselves write:

"I, Ivan Mikhaylovich Shavrey, born 3 January 1956, am Belorussian. I am a fireman at the Chernobyl AES fire unit. During the accident, I was on duty as the orderly with the guard at the unit's position near the control room. With me were relief controller S.N. Legun and incoming orderly N.L. Nichiporenko. We were standing together and chatting when suddenly.... At the alarm we drove off. We took up our positions, then, after a while, our subunit was transferred to help Independent Militarized Fire Brigade No 6, which had arrived at the fire. They set up their vehicles along row 'B.' A. Petrovskiy and I climbed onto the roof of the machine room and on the way met guys from Independent Militarized Fire Brigade No 6; they were

in a bad way. We helped to get them to the turntable ladder and ourselves went to the center of the fire, where we stayed until the end, until we had put out the fire on the roof. After carrying out the task we came down, where we were picked up by 'first aid.' We were also in a bad way...."

"On 26 April 1986, I, V.A. Prishchepa, was on AES guard duty. The lay shift had passed without incident. I was to be orderly that night. After watching TV I lay down for a rest. The alarm sounded during the night. I dressed quickly and got in the truck. From it I could see the flames at the AES. Lieutenant V.P. Pravik, chief of the guard, got into our truck. He radioed call No 3, under which all firetrucks in Kiev Oblast were to come to the scene to extinguish the fire. On arrival at the AES there was no room nearby for our truck (that is, there was no hydrant). I shouted to the driver of the front vehicle: 'Move to row "A!"' There is a hydrant there. We laid a main line.... I went up the turntable ladder onto the roof of the machine room. When I got up there I saw that the roof covers had been destroyed. Some had fallen in, others were loose. I went back and saw Major L.P. Telyatnikov on the turntable ladder. I reported to him. He said I should change my post and stay on duty on the machine room roof. So I stayed there with L.P. Shavrey until morning. In the morning I started feeling bad. We washed and I went to the medical unit.... I have no further information."

[PM201022] A white ward. Drips. Night sisters. Thin, sharp, pain-relieving syringes. Someone else's blood, which will become your own, rushing through tubes. Your own blood is no longer your own, the doctors change it more and more often.... Anyway, that is what I think. I will not discuss what the young lads of Chernobyl and Pripyat think about it: I could not bring myself to ask them.

I am holding another document officially entitled "Explanatory Note." In it a genuine real-life hero explains not the courage of his own act, no. He talks about how his friends acted. By the end of the letter Private Andrey Nikolayevich Polovinkin was clearly tired. And the lines of his "explanatory note" were scribbled....

"...We arrived at the accident scene in 3-5 minutes. We turned the truck around and got ready to fight the fire.... I went up onto the power unit roof twice to pass on the unit chief's orders about how to act. I personally want to note positively the contribution of Lt Pravik, who knew he would suffer severe radioactive contamination but still reconnoitered everything in detail. I can also note Ivan Shavrey, Leonid Shavrey, Aleksandr Petrovskiy, Bulava.... I do not know who else distinguished themselves since the firefighting continued after I was taken to the hospital." I want to repeat yet again: /THE FIREMEN WERE PERFECTLY AWARE OF WHAT THEY WERE GOING INTO. THEY KNEW WHAT THE BUILDING WAS THEY WERE SAVING FROM THE FIRE./ And had it not been for their precise and selfless work the radius of the special zone could hardly have been its present size today.

And we traveled into that zone toward the station in an armored personnel carrier, having battened down the hatches. The road was familiar to Senior Sergeant Nikolay Oleynik, the driver from Berdichev. Lieutenant Yuriy Moslak, the radiation monitor, had also learned the route, but for him it was made up not of turns and bumps but of background radioactive spots.

The herosim of the moment has given way to everyday work. However, the intensity of these days is so high that it is not wrong to speak in a high-falutin style even about ordinary work. But at work such talk is superfluous.

...The red trucks stopped by the concrete canal wall near the station. No, this time it was not a fire: The firemen were pumping water through their hosts to make a cement slurry. This would seem simple, but now /EVERYTHING IS IMPORTANT/ here. Were the water to dry up suddenly, the pipes through which the slurry was being supplied to the damaged reactor would "set" and it would be impossible to unseal the pipeline--tremendous work would come to nothing and valuable time would be lost. "Ifs" must be ruled out. And the supply of slurry to the concrete mixers is duplicated no less than three times.

Viktor Zadvornyy, senior inspector at the Ukrainian MVD Fire Administration, pointed out a sprinkler device set up on a red and white vehicle. The invention has made it possible to considerably reduce the radiation level in the region of the pumping center. Is this a small detail rather than an event? By no means! The people here are working round the clock in shifts.

Speed, speed, speed.... All the radioactive "dirt" must be cleared away as quickly as possible. The reactor must be "coped with" as rapidly as possible. The day of the final victory must be brought closer. Oh, how greatly we wish to accomplish this. But life and scientists' calculations leave no room for overconfidence. These things take time. Time....

I entered the station building with Major V. Mayevskiy, chief of the AES militarized fire brigade. He had replaced Leonid Telyatnikov in the post. Many of the people working at the station today know Vladimir Stanislavovich both because they often see him at all the buildings and from his last posting--the South Ukrainian AES. He also knows virtually all of them--that is his job--and can find his way to any point in the building through the maze of passages virtually with his eyes closed.

There is no need to explain that the strictest monitoring of the situation is necessary. The firemen's task was complicated by the fact that the alarm system is currently out of action; partly because of damage to the lines, partly because of the unusual atmospheric ionization. So it is necessary to visually monitor all areas of the enormous building.

Of course, the attitude to firemen in Chernobyl is not the attitude which many of us take at home, accustomed as we are to hearing absolutely true but boring truths. Here everyone knows how many of the most difficult tasks the service is solving. The firemen carried out an operation which everyone

followed with excitement: Teams of volunteers worked in shifts for over a day, pumping out contaminated water from the pool under the reactor in unit four. Finally, the valves appeared and stationary pumps could be used. The pool was drained. Thus, the threat of the incandescent reactor elements reacting with the water was over!

[PM201024] Firemen are always in extreme situations. They go where others are forbidden to go. They are used to it, they have experience won at a high price. In Chernobyl they are entrusted with the most complex sectors. But the specifics of the service are such that it is not easy to replenish the reserve of people and equipment. Of course, the best specialists, many of whom have come from other AES's, are now here. It is the 21st day since the disaster. More than 400 firemen have now passed through the zone around Chernobyl. They are now resting and have been replaced by others. New equipment is also arriving to replace that which is out of action.

I saw a special map of the AES and the territory with red marks indicating equipment out of action--19 units.

This is also part of the routine in the special zone.

When I was leaving the station, I asked: What firefighting work is still to be done? This was the answer. First, to do everything that firemen can do faster than anyone else. Then, to carry out preventive monitoring of the station, to ensure water supplies, to carry out decontamination, and to patrol the deserted settlements.... Why, when there are no people there? But, it turns out, a short circuit can occur even in a locked house: The electric circuits are live around the clock--the station has turned from a producer of electricity into a consumer. And considerable energy is needed to eliminate the consequences of accidents....

On the last page of my notebook is the note: "Ring Telyatnikov at the Moscow hospital" (everyone at the AES was asking about his health). There is a list of names too. It was dictated by those who are currently on duty in the special zone. The newspaper names these six men: Sergeant Nikolay Vasilyevich Vashchuk, Senior Sergeant Vasiliy Ivanovich Ignatenko, Lieutenant Viktor Nikolayevich Kibenok, Lieutenant Vladimir Pavlovich Pravik, Senior Sergeant Nikolay Ivanovich Titenok, Sergeant Vladimir Ivanovich Tishchura.

We will remember them with gratitude forever. But how can the lines of a hurried report convey that grateful memory? There will come a time when we will all breathe easier, then accurate and correct words will probably be found. Words worthy of the feat.

But now more firemen's notes. Sergeant Aleksandr Petrovskiy writes simply and briefly about everything that has been done: "Ivan Shavrey and I were ordered to climb the turntable ladder to put out the fire on the roof. We were there for 15-20 minutes. We put out the fire. Then we came down: It was impossible to stay there any longer. About 5-10 minutes later we were picked up by 'first aid.' That's all." Is that all?! So simple?



"In this situation nobody allowed themselves to relax. On the contrary, everyone showed their cohesion and organization and their ability to make independent and even risky decisions which were the only correct ones in the situation. Although everyone knew and realized what they were going into. I, as the department commander and a deputy in the city soviet, want to note that all this depended on us and we carried it out honorably and conscientiously. We did not harm the honor of the firefighting subunit guarding the Chernobyl AES. But ultimately I want to note the comrades who from start to finish honorably fulfilled their service duty....

"Department Commander I.A. Butrimenko." And another: "I was told to report to the unit in my truck. I reached the scene of the fire.... There I was tasked with getting through to Lieutenant Khmel and taking the truck to the reservoir. I coped with the task.

"AR-2 driver V.V. Bulava." We take our hats off to you for your work and for the duty you carried out.

Please get well soon!....

We are carrying out the request of Major L. Telyatnikov's colleagues. We discussed his feat in IZVESTIYA No 130. After the article appeared, calls were received from various cities and the editorial board received its first letters. The readers admire his heroism and ask about his health.

Our correspondent G. Alimov contacted Professor A.K. Guskovaya, department chief at Clinical Hospital No 6, and L.N. Petrosyan, one of the doctors on the case. Several firefighters from Chernobyl and Pripyat are in this clinic.

[PM201026] "The treatment is proceeding as planned," Angelina Konstantinovna said. "A large collective of physicians is working virtually around the clock without time off. Those who need them have had bone marrow transplants. Everyone is receiving so-called blood cell replacement therapy and antibacterial and detoxification [bezyntoksikatsionnaya] therapy. But not everything is in our hands. Unfortunately, it has not been possible to save everyone...." Lyudmila Nikolayevna Petrosyan: "They are behaving like heroes. They help us with their endurance, patience, and discipline." About Maj Telyatnikov. He has a slight temperature but his appetite is normal, as is that of the others, incidentally. And we are not giving up hope of a favorable outcome....

/9365

CSO: 1800/447



## NUCLEAR PLANT FIRE

### DETAILED ACCOUNT OF NUCLEAR PLANT FIRE

Kiev LITERATURNIA UKRAYINA in Ukrainian 22 May 86 pp 1, 2

[Article by Eduard Pershin under the rubric: "Our Special Correspondent" Report From the Vicinity of the Chernobyl Nuclear Power Plant" and headlined "They Were the First to Enter the Fire"]

[Text] Chernobyl, Pripyat, Kiev -- Twenty-seven days have passed. This is sufficient time to analyze what happened and to make a full appraisal of people's self-sacrifice. In working on this article I spoke with a great many people of very diverse occupations and professions and asked them to relate what was etched in their memory. But in reply these people merely shrugged their shoulders and said they had simply been doing their job. Nevertheless ... There were two moments -- I use the word "moment" somewhat arbitrarily -- when a small group of people joined in combat with the force of the atom -- which had temporarily gotten out of control -- and the fate of the entire Chernobyl power plant hung in the balance.

M.S. Gorbachev, speaking on Soviet television, stated what had happened. Our party's general secretary stressed the courage with which Soviet citizens had acted.

A report that an explosion had occurred at reactor No 4 was received by paramilitary firefighting unit No 2, assigned to protect the Chernobyl Nuclear Power Plant, at 0128. A duty fire crew, led by MVD Lieutenant Volodymyr Pravyk, immediately headed out for the accident site. At the same time the SVPCh-6 [Independent Paramilitary Firefighting Unit No 6] in the town of Pripyat and the central fire communications post of the firefighting administration of the Kiev Oblast Executive Committee Directorate of Internal Affairs were notified.

The duty fire crew reached the scene at 0130. Lt Pravyk ascertained that the roof over the control room was burning (the height of the structure, together with the reactor room, was 71.2 meters) and the flames had already spread to the building housing the turbogenerators. The roof of this building had caught fire in several places -- a total area of approximately 500 square meters was involved. There was a danger that flames would engulf the entire building. Seven minutes had passed since the explosion.

Subsequently, official documents stated: "The decisions made by Lt Pravyk, the first person to direct the firefighting effort, were correct..." It was during these seconds that the fate of the entire power plant was determined. The lieutenant -- on whose graduation certificate the members of the examination board at the Cherkassy Firefighting Technical School of the USSR MVD had written: "He will require assistance and oversight at first" -- was able to determine without error in an extreme emergency the most critical point of the fire: The decision was made to extinguish the fire at the turbo-generator building and reactor room, where part of the roof had already collapsed.

A duty fire crew arrived from Pripyat at 0135, led by MVD Lieutenant Viktor Kibenok. Leading a team of respirator-equipped firefighters, he went in to investigate the fire in the reactor room, that is, in a zone of intense radiation. Directorate of Internal Affairs chief Major General Militia V. M. Korniychuk arrived at the Kiev Oblast Directorate of Internal Affairs at 0140. We should note that the message alerting the Directorate of Internal Affairs duty unit indicated only that there was a fire at the nuclear power plant. Only a fire! Not until later was it known that damage had occurred to the reactor core... But a nuclear power plant is a nuclear power plant, and within minutes -- as prescribed by the emergency situation coordination plan in effect -- crews from the Firefighting Directorate of the Kiev City Executive Committee Directorate of Internal Affairs were en route to Chernobyl. Fire trucks from Ivankov and Polesskoye were already on their way ... Within a few hours an operations headquarters had been set up at the accident site, headed by Colonel V. M. Buvsunovskyy, deputy chief of the Kiev Oblast Executive Committee Directorate of Internal Affairs. A team of experts had conducted a radiation reconnaissance and had filmed the damaged reactor on video tape.

At 0145 Lt Kibenok was organizing an effort to extinguish the fire on the roof of the reactor building, operating from elevated fire truck ladders. The commander of the firefighting crew immediately realized that the reactor and firefighting water supply system had been knocked out by the explosion and that the temperature would be rising. He attempted to run water through the standpipes to cool down the reactor, but it was determined that they had also been severely damaged at the upper mark as a result of the explosion.

Major Leonid Telyatnikov, chief of VPCh-2 [Paramilitary Firefighting Unit No 2], arrived at the scene of the accident at 0156. Work was going on under exceptionally difficult conditions: As a result of the accident radioactive fragments had been thrown from the main building and the men were working in conditions of elevated radiation; powerfully-acting toxic substances were being generated in large quantities by burning chemical substances; firefighters with hoses were working at heights ranging from 32 to 70 meters, regardless of the fact that building structures could collapse at any moment ... It was in this exceptionally difficult situation that Maj Telyatnikov determined the directions in which the fire might spread to other reactors.

Lieutenants Pravyk and Kibenok and Maj Telyatnikov, working in elevated radiation levels, stayed on the roof of the turbogenerator building right up to the point of physical collapse. Rescue squad ambulances rushed them to the hospital, but they had accomplished the main thing -- they had organized the firefighting effort. Now working side by side with the Pripyat firefighters were their comrades from Chernobyl, Polesskoye, Ivankov, Vilcha, and Rozvazhev.

The process of fighting the fire continued without interruption; the first shift of firefighters was replaced by 0400. Radiological monitoring indicated that radiation at the accident site was exceeding the maximum allowable level; the decision was made to form a composite firefighting team with fresh crews that were arriving and to hold it in reserve. This decision made it possible to maintain the working efficiency of the crews, because it was necessary to accomplish the additional task of neutralizing the consequences of the accident. The fire was contained at 0450 and extinguished at 0635.

Thus, the first blow struck by the nuclear danger had been repulsed -- the cost of superhuman efforts and at the cost of human lives (fatalities included Lieutenants Pravyk and Kibenok, and Senior Sergeant Volodymyr Tyshura, who had fought the fire shoulder to shoulder with his superiors) -- but it had been repulsed. The entire weight of this incredible responsibility had been assumed by the firefighters of the Kiev Oblast Executive Committee Directorate of Internal Affairs. This was a severe test of courage, staunchness, and maturity.

However, victory was still a long way off, a very long way off. The experts were faced with a great many problems. They had to solve a problem involving a great many unknowns, two of which were perhaps the most unknown: how to reduce the temperature in the reactor core in the shortest period of time (a large quantity of nuclear fuel and graphite in the reactor core was in an incandescent state) and how to withdraw coolant from the reactor. It was desirable to solve both problems in parallel.

On 28 April a special team headed by Major P. Borys was formed by the Kiev City Executive Committee MVD Firefighting Directorate. First Sergeant F. Okolovskyy and Deputy Commander for Political Affairs V. Ivashchenko of the Directorate of Internal Affairs SVPU-3 were to take part, alongside the Major, in the concluding phase of the operation. All of them were athletes. What task were they to perform? A special manifold was fabricated of large-diameter pipe. Spray nozzles were placed in this pipe, in line with calculations by scientists, that would spray water onto the walls of the reactor at a precisely-computed rate. This manifold was to be "draped" onto the redhot reactor with the assistance of helicopter pilots. They were also to run hoses along the roof of the turbogenerator building. It seemed that nothing could prevent these intrepid men from accomplishing their task. But the first practice sessions demonstrated that absolutely calm wind conditions were required to accomplish this simple and unquestionably effective plan. The slightest breeze would swing the manifold together and the 1,500-meter length of firehoses with considerable amplitude, while other work was going on at the same time -- in particular, helicopter pilots were dropping special loads into the crater ... Ultimately it became possible to drop this project because the temperature was gradually decreasing using other methods, but the problem of removing coolant from the reactor demanded an immediate solution.

At this precise moment articles appeared in the Western press claiming the inevitability of a catastrophic disaster. A great many things were stated, but nothing about the fact that Soviet scientists were backed up with several plans that could be initiated instantly. At that time they had a solid handle on everything taking place in and around the reactor. A basic plan also existed to remove the reactor coolant -- that is, via special openings. As already stated, however, due to the accident the process and firefighting water supply system had been disrupted; now the valve mechanisms on these openings were sitting under 3 meters of water. Of course, all this water was now radioactive.

Would it have made sense to try sending a scuba diver down to open the valves? Such a plan was discussed, but there was less than a 100 percent possibility of success, and to risk human lives ... I repeat, by that time they had a solid handle on the situation: Radiological monitors were reporting that the radiation level, although exceeding the maximum allowable, had dropped significantly. By that time, 6 May, a five-man team had already arrived at the nuclear power plant from Belaya Tserkov, led by MVD Major Heorhiy Nahayevskyy.



I reached the Major and his team -- Sergeant Serhiy Bovt, First Sergeant Mikhail Dyachenko, Sergeant Mykola Pavlenko, and Senior Sergeant Petr Voytsekhovskyy -- by telephone at their quarters and asked them how they were feeling.

"What to you mean, how are we feeling?" came the reply. "If you had asked me how the nuclear power plant is feeling, I would reply that everything is fine. But everything is always properly squared away with us," he laughed.

"Well then, how did it go? How did you have the courage? With the boys?"

"Why are you talking in riddles?" he again laughed. "Why do you not come out here? We'll go fishing together, sit down on the riverbank, and give you the whole story ...

You cannot? Too bad ... Well, if we have to do it over the telephone, that is the way it must be ... Frankly, the boys and I were anxious to get out to the nuclear power plant right after the accident. We were not born yesterday; we know what a nuclear power plant is, we know what can burn there, and we also know what must be done."

"But the radiation ..."

"That is just the point ... When the situation became more or less normalized, I thought to myself: Maybe the radiation does not form a solid wall; it may be higher in one place and lower in another ... That is, one must stake out a lane, just like in a mine-field. I threw a hint to the boys -- and they came back: let us go! Please do not misunderstand me; if I say something couched in pretty terms, pay no attention. I was thinking first and foremost about the fact that I wear the shoulder boards of an MVD officer, that somebody has to be the first on the frontline. I was thinking about the fact that we firemen and we alone must perform this task ..."

As I listened to Nahayevskyy, I could not help but picture a battlefield scene. Yes, a battlefield. Believe me, there is not the slightest exaggeration in this term. They and Captain Zborovskyy rode out on an armored personnel carrier to conduct radiological reconnaissance. It was 400 meters to the power plant from the shelter where all of them were temporarily positioned, but the zone through which they passed contained the highest levels of radiation. They were looking for the safest route. Later, a member of this team, Kiev native Sergeant Oleksandr Nemyrovskyy (I met firemen from Kiev at the hospital), would say: "If I had any say I would put up a statue to this captain up there in front of the power station ..." Zborovskyy found a route -- designed for the quick, the skillful, and the stout-hearted.

The operation was to be mounted by two teams: Nahayevskyy's team and a team from Kiev consisting of Major Yuriy Gets, Senior Sergeant Ivan Khudoliy, Sergeant Oleksandr Nemyrovskyy, and Sergeant Volodymyr Trynos (all were drivers). While the team from Belaya Tserkov practiced -- they would be pumping water through two or three hoses -- three Kiev vehicles, supported by Capt Zborovskyy and his men, moved forward. The clock read 2200 hours....

They accomplished their job; they laid the hoses. Now it was time for Nahayevskyy's team to swing into action; They set up a pumping station and connected the hoses.... The work began. They had to refuel the pumping station and check the operation -- 1,500 meters there and back, both ways on the double. "If only the pumping station does not break down, if only it does not break down," the thought kept running through their heads. But it did not break down. Again the Belaya Tserkov team dashed into the fray;

soon a second station was operating. Then an armored personnel carrier headed out to conduct radiological reconnaissance and... severed the hoses. The situation was critical! Nahayevskyy would later tell me: "Before I even had time to react to the situation Pavlenko and Bovt were on their way to the site...."

At 0300 on 8 May the nine men, totally exhausted but happy with the awareness of a duty carried out, accepted congratulations. The danger was over.

What is the current situation in the area of Chernobyl? I shall not address purely technical problems -- a plan of specific measures has been mapped out and work continues. We shall discuss our impressions from a trip through Ivanovskiy, Chernobylskiy, and Polesskiy Rayons.

First of all, there is absolute calm and order. There has been a substantial increase in truck traffic toward Chernobyl, and one encounters vehicles bearing the most diverse license plates; the entire country has come to our aid. There is an increased number of cars of the most varied makes around party rayon committees and rayon executive committees, where every day lights are burning from dawn to dusk. As before, the militia is operating with a heavy workload.

The work load is affecting the internal affairs agency subunits throughout the republic. I am not mistating myself, for militia personnel from many oblasts throughout the Ukraine have come to the assistance of their Kiev colleagues, who during the most difficult days in April and May endured superhuman work loads, remaining on duty 10 to 12 hours at a time -- they have been put to a difficult test. For example, the first to take the brunt of the accident were the firemen who directly engaged the raging flames. But we should not forget the fine, precise job done in this emergency situation by other internal affairs agency services. Situated at a distance of 1 km from Pripyat is the single-track railway station of Yaniv, where a great many valuable carloads of goods accumulated at the time of the accident. On top of this, more than 10 freight trains and a passenger train pass through the station in the course of a day.... It was precisely thanks to efforts by personnel of the Southwestern Railroad's transport militia administration that the station functioned without interruption from the very first hours after the accident, and the following day trains began arriving with all the materials needed to neutralize the consequences of the accident. And how much work fell to the lot of the state motor vehicle inspection office? In Chernobyl I happened to encounter Major General Militia V. Ya. Pitsyura, Ukrainian deputy minister of internal affairs.

"You know, when we completed evacuating the population from Pripyat and Chernobyl," he said, "it seemed that things were easing up. No," he shook his head, "today a State Motor Vehicle Inspection officer stands 4 hours on post duty. He acts as a precinct cop, maintains order, and serves as a traffic cop as well (trucks are hauling supplies to Chernobyl around the clock). He also takes part in radiological decontamination and inspects motor vehicles using radiological monitors. And let us recall those initial days, when many families were temporarily separated. I can understand those people who were trying to get through to their families. Just as our people understood and had sympathy for what they were feeling. If it had not been for the firmness and staying power of the State Motor Vehicle Inspection officers a gigantic traffic jam would have inevitably developed on the roads, which for all practical purposes would have made it impossible to accomplish prompt emergency rescue activities ... Incidentally, where is your car's pass? How is it they let you into the zone?"



"The pass is in my notebook," I apologized. "And anyway ... it is a general's car ..."

"There are no generals' cars here," the deputy minister admonished. "The regulations here apply to everybody -- from buck private to field marshal, including the esteemed members of our press." He fell silent. "This is a restricted zone ...Incidentally, when you are in the zone I advise you to use breathing gear. Today dust is the most dangerous enemy. We are even preparing a new road sign that prohibits stopping along the side of the road. That is good advice ..."

We moved on, passing through empty villages at high speed. How eerie it all seemed: gardens in bloom, a bright blue sky -- and not a soul in sight. Of course we know that this is a temporary situation, that after a short time soft children's voices will once again be heard in the present 30-km restricted zone. We know this for certain, because already throughout Chernobyl'skiy Rayon, with the exception of the area immediately adjacent to the damaged reactor, the situation has been returning to normal.

One of the washing stations (where people and vehicles are subjected to decontamination) is situated in a beautiful grove of birch trees. Birds are singing, the emerald-green grass glistens in the sun's rays, while everywhere one sees red signs indicating a danger zone. But these signs are so out of place with the natural surroundings!

Responding to questions from reporters, Prof Robert Gale stressed that one of the principal conclusions one can draw when analyzing the events at Chernobyl is that man's capability to react to nuclear disasters is limited. What kind of prompt medical assistance can the public count on in the case of nuclear war or a nuclear explosion?

It was as if the U.S. scientist was continuing the words spoken by M. S. Gorbachev over Soviet television, addressing not only Soviet citizens but all peoples of the world: "With all this we must not forget that there exist in our interdependent world, alongside the problems of the peaceful atom, problems of the military atom. This is the main thing today. The accident at Chernobyl has shown us once more what an abyss will open up if nuclear war engulfs mankind. And the stockpiled nuclear arsenals contain thousands upon thousands of disasters much more terrible than the one at Chernobyl."

/8309

CSO: 1800/000

## NUCLEAR PLANT FIRE

### PARTY IN FOREFRONT AT CHERNOBYL, PRAVDA REPORTS

Moscow PRAVDA in Russian 16 May 86 p 6

[Article by PRAVDA special correspondents V. Gubarev and M. Odinets under the "Events, Facts, Commentary" rubric: "Communists in the Front Ranks: The Chernobyl AES--Days of Heroism"]

[Text] "At a time when especially important tasks are being carried out, I ask to be accepted as a candidate member of the CPSU. I want to perform my working duties on the front lines, together with the communists..."

This application was written at the Chernobyl AES (nuclear electric power plant). Physicists and technicians, members of the armed forces and firemen, scientists and aviators have asked to be admitted to the party, because communists also during the accident at Chernobyl have been on the front lines.

Examples of their heroism are uncountable.

For a long time, we were unable to begin our conversation. Several minutes earlier, word had come that Lelechenko had died. Burns and radiation had done their work. Lelechenko had been their friend.

Vladimir Lyskin and Nikolay Oleshchuk are foremen in the electrical shop at the Chernobyl AES. On the day of the accident, they found themselves right next to the reactor which, through cracks, released deadly doses of radiation and, together with their comrades, they repaired the damage to the power equipment.

"Sasha Lelechenko conducted himself as a real hero in these difficult hours," relates Vladimir, "and the others took an example from him."

"We didn't think about the danger," says Oleshchuk. "It was necessary to turn out power. Without it, the scope of the accident could immediately grow..."

Lyskin's son, Yevgeniy, works at the AES and his wife is also employed there, at the pumping station.

"How did it begin?"

For a long time, Nikolay Oleshchuk and Vladimir Lyskin were silent, and we understand this: it is difficult to recall that night. However, it is necessary to recall everything, down to the smallest details, so that people will know how those who first gave battle at Chernobyl conducted themselves. And they talk not about themselves but about everybody--they were part of a large group of people who worked at the plant in the first hours after the accident.

"They called me right away," Nikolay recalls. "The order was brief: 'Pick up your people'. Of 17 men, seven turned out to be at home. The rest were off enjoying themselves: it was, after all, Saturday and we have great places to go. The fishing is excellent. So they had gone away on their days off...I realized at once that the situation was bad, if ambulances were headed for the plant...But it was when I arrived at our bloc, No. 4, that it became clear how serious the accident was."

"Graphite had been thrown out and was lying on the floor--the area was very large," Vladimir adds.

"But we forgot about the danger because it was necessary to check the transformers...Then the cable channels began to melt..."

"And Lelechenko thought also about people's safety. About everyone except himself. It was necessary to reclose the hydrogen delivery slide valve. He went himself; he wouldn't allow anyone else to do it. This is heroism...He thought about his own guys. Aleksandr Grigoryevich very much liked working with young people; he took them into the shop and instructed them. And everybody liked him very much--he was a real teacher. So, Lelechenko carefully saw to it that none of his boys received dangerous doses. He literally chased them out of the shop, and did not leave himself... And when later, already barely able to stand up, he noticed our own state, from our faces probably, he suddenly began to tell anecdotes..."

"It was an unusual sensation--you don't feel anything. You are neither cold nor hot... But when we turned on the transformer, we suddenly felt better--indeed we had succeeded in delivering nourishment to the damaged bloc."

"Those who were at the plant didn't leave. Each person understood his own job. Incidentally, people who are not close to nuclear energy conducted themselves much worse. They were afraid."

Pripyat is a young and vibrant city. Many people have worked at this plant since the first bloc opened. I earlier worked at the Kursk AES," says Oleshchuk. "An excellent staff of workers has been put together..."

"And how magnificently the people acted! Some were on vacation but returned immediately when they heard about the accident."

"Foreman Arkhipov was vacationing in Poleskiy Rayon. He rushed back to Pripyat in his car. The militia stopped him. They had already set up their first posts. He abandoned his car and continued on foot. And this was for

30 kilometers. He entered the contaminated zone and received a radiation dose. Others in his place would have given up and run, but Arkhipov walked to the plant...and there were thousands of such examples of selfless performance of duty."

"Those who work in nuclear energy are devoted to it. I am so in love with the city, with our AES, with this work, that I can not imagine my future life without it.

"Everybody is ready to work!... Particularly those who survived that first horrible night..."

Vladimir and Nikolay grew silent. Most likely they were again recalling what they had lived through. And along the streets of the housing area strolled the workers of the Chernobyl AES (which, incidentally, they steadfastly call the Pripyat plant--after the name of the settlement and the river). Within the next few days they will be called on to do duty at the plant. After careful medical checks, of course. If the doctors give the "o.k.", then the power workers will be sent to the 1st, 2nd, and 3rd blocs of the AES, which are in a duty status.

"The party organization of our nuclear electric power plant," says the secretary of the party committee, S. Parashin, "can be proud of its communists. Each one did and is doing everything within his power and possibilities. At shop party meetings, which were held in all units, we together analyzed the actions of every person and noted people's initiative, bravery and resourcefulness. Besides those who struggled directly at the reactor in the emergency situation, the dosimetrists at the AES also distinguished themselves. Then and now they can be seen everywhere--close to the reactors in the machinery hall, and at the entrance gates. Among them, there are 11 party members. And each was out front, in the vanguard."

When the difficult days of overcoming the emergency started, the party committee received more than 10 applications for candidate CPSU membership. Dosimetrist B. Sabilyanov, foremen S. Panchenko and S. Pichurin, deputy chief of the reactor shop A. Kedrov and others made a firm decision to tie their fate to the party. All are now working selflessly at the plant.

The firemen demonstrated selfless bravery in the first hours of fighting the emergency, particularly in extinguishing the flames on the roof of the machinery hall. In the political department of the Ukrainian Ministry of Internal Affairs, they showed us about 20 applications recently received from people working in the most difficult and demanding areas during efforts to cope with the accident at the nuclear electric power plant. "I wish to carry out my professional and civic responsibilities in overcoming the consequences of the accident at the Chernobyl AES as a communist", writes militia captain O. Kazakov. Attached to his application were recommendations from long-time party members V. Kuybin, Yu. Vergel, and A. Vdovichenko. They are well acquainted with their officer colleague and speak of him with the kindest of words. The application of militia worker V. Pasko, written by him before he took up his battle station in the defense of Pripyat, is packed with emotion: "During these times, I want to be with the communists in the most crucial sectors".



As stipulated by the CPSU Charter, all the applications are being processed expeditiously. The decisions of party meetings being held in Pripyat and its rayons, where people from a 30-kilometer zone have been evacuated, are being reviewed on a first-priority basis. At a party meeting at the Khobne sovkhoz in Poleskiy Rayon, the chief engineer of this farm, Vasiliy Sheremeta and his wife, sovkhoz agronomist Galina Sheremeta, were accepted as candidate members of the party. The very next day, as we were told by the first secretary of the Poleskiy Rayon party committee, N. Priymachenko, the rayon committee reviewed and confirmed the decision of the sovkhoz party meeting.

During these days, the crews of the helicopters which are operating in the air over the damaged 4th Power Unit are also working selflessly. A party group, headed by L. Vaytko, was established within the helicopter personnel. Demonstrating by personal example how the tasks must be performed, he has taken off many times, helping to cover over the reactor which was damaged in the accident.

And it is not mere coincidence that the flyers' work in the skies above Pripyat has been evaluated highly. It has been learned here that the government commission wrote in its report that: "Note must be made of the highly organized work carried out by aviation units in carrying out assignments in connection with handling the accident at the Chernobyl nuclear electric power plant."

The party organizations of medical units (and more than 1,300 doctors, nurses, laboratory technicians and dosimetrists along with 240 ambulances are now working in the region of the Chernobyl AES and areas around it) are pointing the communists toward precise and accurate work and toward high-quality performance of medical and prophylactic measures among the victims. And the party organizations here are receiving many applications from medical personnel requesting candidate membership in the party.

The circumstances demand a maximum concentration and full expenditure of effort from all communists. Speakers at a party meeting at the kolkhoz imeni Lenin in Ivanskovskiy Rayon noted that a new style of work is demanded in the extraordinary conditions that have been created.

"We must now work well not only for ourselves, must not only double our efforts," said the secretary of the Kolkhoz party organization, N. Popov, "but we must triple them. We are placing special hope in the young communists: their youth and fervor must serve as an encouragement to all, must raise their drive to work, and must multiply the energy of all working people!"

13032/5915  
CSO: 1800/430



## NUCLEAR PLANT FIRE

### CHERNOBYL FIREMEN INTERVIEWED IN MOSCOW HOSPITAL

LD031753 Moscow Television Service in Russian 1430 GMT 3 Jun 86

[Video interview with Chernobyl AES Firemen by correspondent A. Ukhov at a Moscow hospital; from the "Vremya" newscast]

[Text] [Ukhov] We are currently at one of Moscow's hospitals where firemen from Chernobyl AES are undergoing a course of treatment. We have been given permission to meet them and we shall now go to them. [Video shows corridor, white-clad person with face-mask pushing a trolley along the corridor] An atmosphere of the strictest discipline and control has been created in the hospital. Contact with patients is allowed only when it is essential and this goes for the medical personnel, too. Gauze face masks are obligatory, so as to rule out even the smallest possibility of infection. This is Senior Sergeant (Vasiliy Bulava). Can I ask Vasiliy a question?

[Unidentified woman] Please go ahead. [Video shows man in bed, wearing only pyjama bottoms, being attended by a doctor who is taking his blood pressure.]

[Ukhov] Vasiliy, how do you feel now?

[Bulava] Normal, everything is going better and better.

[Ukhov] This is Sergeant (Aleksandr Petrovskiy). [Video shows man in pyjamas shaving; his head is completely bald] Well, we have just looked and saw you shaving, so everything is normal?

[Petrovskiy] Well, I feel normal, that's all. I want to go home. My sister, parents and wife telephoned me yesterday. Everyone is waiting--surely the time will come for me to go. [Video shows man in dark overalls on a bed. By his side stands a man in white overalls, his facemask on, twiddling the knobs of a piece of equipment, leads from which seem to be connected to the man on the bed.]

[Ukhov] This is Lieutenant (Petr Khmel).

[Khmel] I feel fine. I'd like to thank Doctor Feliks Sergeyevich, who is in charge. He comes up to us with jokes. He will visit the ward and

say what's going on here then, he'll tell you a story and it is pleasant, for he lifts up our spirits. I would also like to thank the nurses, our nannies who fuss over us. They spare no effort on our behalf, they give of themselves wholly, they do everything for us, so that we are healthy and that.

[Ukhov] This is Junior Sergeant (Vladimir Kholodeychikov). [Video shows man sitting on bed, wearing the same dark overalls as the previous patient, reading a letter.]

[Kholodeychikov] Now I feel normal, completely normal, soon I'll be home. ( They are waiting there for me, you know).

[Ukhov] This is Private (Sergey Kishchenko). [Video shows man in dark overalls, his head is bald] How do you feel now?

[Kishchenko] Fine.

[Ukhov] When do you go home?

[Kishchenko] They say in a week or 10 days time.

[Ukhov] And who is waiting for you at home?

[Kishchenko] My mother, my sister.

[Ukhov] But no wife, for the time being?

[Kishchenko] No.

[Ukhov] All that is still before you.

[Kishchenko] Yeah.

[Ukhov] It is with particular agitation that we enter the room of Mayor (Leonid Petrovich Telyatnikov)--the man who on that night was in charge of the firefighting operations. [Video shows man in red pyjamas sitting on the bed reading a newspaper, very sparse growth left on his head] (Leonid Petrovich), we have just visited your comrades. All of them say: You must, without fail, visit Leonid Petrovich and convey our greetings and tell him that we all feel well and they are interested in how you feel yourself? Well, how do you feel? [Video shows Ukhov is speaking into microphone through facemask]

[Telyatnikov] Excellent. I am waiting, though. I ought to be released soon. I am very pleased that all the lads feel well, I am simply glad from the bottom of my heart. I talk about things with many of them--it is a good thing that our windows here are open and at times we can lean out of them.

[Ukhov] What would you like to convey to all our television viewers?

[Telyatnikov] First and foremost, I would like to convey to them the enormous gratitude for the way in which all our--I mean our whole people--received this calamity, this accident at Chernobyl AES and for the heartfelt attitude on the part of everyone, I mean for the misfortune that overtook Ychernobylskiy Rayon and a number of the neighboring rayons. A big thank you to you, and thanks to all those comrades who are currently working so as to make our station operational as soon as possible, so that electric power is generated.

[Ukhov] I can tell you that firemen continue to work, everyone is full of praise for them.

[Telyatnikov] Good lads, big thanks to them! That's the way to carry one! [Video shows room with table in the middle. Six people dressed in white overalls and wearing white caps are sitting round the table.]

[Ukhov] Towards the end of our short visit to the hospital we had a meeting with Professor Angelina Konstantinovna Guskova, head of the hospital's clinical department. Tell us, how are the firemen doing during the course of treatment?

[Guskova] You know, the admission of a group of people who belong to the same profession, all of them being admitted at the same time poses, naturally, a certain difficulty: They are each of them individually ill and also they worry themselves sick about all the others. They conduct themselves courageously, as befits an outstanding group, such as theirs, one that occupies a good position within society; they are ready to return again to their work and they help us very much by their courage, resilience, discipline and trust. We want to believe that all the patients who are in our clinic at present are on the mend. This will be faster in some, slower as far as others are concerned, but, in general, it seems to us that we have the wherewithal to enable them to return to life and work.

/9604

CSO: 1800/465

## NUCLEAR PLANT FIRE

### MOSCOW TV CARRIES PROGRAM ON CHERNOBYL EVENTS

OW131500 [Editorial Report] Moscow Television Service in Russian at 0625 GMT on 13 June broadcasts its 30-minute "Our Correspondents Report" program presented by commentator Aleksandr Krutov. The program begins with aerial views of the Chernobyl area and a caption "Disturbing May at Chernobyl" appearing on the screen. It then cuts to shots of abandoned village homes, locked and sealed doors of schools, stores and offices followed by shots of Krutov saying that his views on many things changed after what he saw, heard, and felt during his 2-week assignment in Chernobyl.

He then adds, "During the disturbing May days we became fully and clearly aware of the cruel truth "who will do it if I do not". This question had to be answered at the risk of their lives by men who became involved in the whirlpool of the Chernobyl events. It happened on the night of 26 April, at 0123. Power suddenly increased at the No 4 power unit; steam was produced and the reaction led to the formation of hydrogen, followed by an explosion which destroyed the reactor and released radioactivity." Krutov then says "the accident at the station provided many lessons for specialists, as well as lessons of morality, honor, duty, decency, and conscience."

Video provides more aerial shots of the Chernobyl plant and surrounding area, with shots of fire trucks heading toward the site. It then shows photographs of firemen against the background of their reports; Krutov reads excerpts from the reports and quotes: "I was ready to go and rest when the explosion occurred. We did not leave until the fire was extinguished. Then we went down and were picked up by the ambulance crew. We were in a bad state, but no one shirked his duty. On the contrary, we showed our solidarity and self-discipline, despite the fact that we each knew what we were facing. Water started heading for the No 3 power unit. It had to be pumped out. Power had to be supplied for doing it, and no one but us could do that. And this is why we stayed, though we knew that the radiation level was very high. The radiation monitor could not even tell how high it was, because the level was off the scale of his instruments. I have read you excerpts from reports made by firemen in the hospital. Twenty-eight men fought the fire, and some of these are no longer with us."



Video shows MI-8 helicopters and crews, and Krutov says that helicopter pilots achieved a great deal. He then adds, "The combat machines took off from wheat fields and headed for the reactor. They flew into the radioactive pillar of gases over it and dropped bags of protective material. They covered the reactor with a thick layer of sand, dolomite, lead, and boron in order to prevent the release of radioactivity into the atmosphere." Video shows helicopter pilot Captain Surkov saying, "They performed a very fine work when the cargo had to be dropped directly into the reactor. A large amount of cargo was dropped and the main fire was extinguished." While video shows helicopter crews, Krutov says, "You can imagine what doses of radioactivity they received while flying to the damaged reactor during all the daylight hours."

While video shows helicopter crewmen speaking about their work, Krutov says "There were hundreds of examples of heroism; most of the people passed the test, but not all." Video shows crane operator Yolshin and other workers speaking about people who fled because they were afraid, and cuts to shots of Krutov saying that they were few, and that many people in Kiev offered to help when they heard about the accident.

Krutov says that the evacuation of Pripjat city was announced at 1400 and that there was no panic during the evacuation. Video shows empty buildings, with Krutov adding that "lack of news about what was happening at the damaged power unit gave rise to various rumors and gossip." Video cuts to shots of foremen Erzhenko saying that all kinds of tales were being told 200 to 250 kms away from Chernobyl. Krutov says, "This is another Chernobyl lesson. Our people will understand anything, just tell them honestly and frankly, explain, and they will understand anything."

Krutov then goes on to speak about all kinds of help being given to the evacuees and says that about 40,000 persons left Pripjat in 2 hours, 45 minutes. Video shows vehicles and tractors being inspected for radioactivity and shows evacuated workers speaking about the warm welcome they received in the new places. Children are shown being sent to pioneer camps in buses, and I.S. Silayev, deputy chairman of the USSR Council of Ministers, is shown speaking about Soviet people offering help. Video cuts to shots of trucks, ships, and helicopters bringing various supplies for stopping the "release of radioactivity from the reactor." It then shows V.A. Masol, deputy chairman of the Ukrainian Council of Ministers, and B.V. Gidasov, corresponding member of the USSR Academy of Sciences, speaking about aid being given by scientists.

After showing vehicles and men in Chernobyl streets, video cuts to shots of Silayev and Academician Velikhov speaking about future tasks during an interview held on 10 May at the headquarters of the State Commission in Chernobyl. While Krutov speaks about work done by medical personnel, video shows people undergoing tests, then cuts to shots of a scientist telling a farmer that her cow's milk is very good.

Video shows Krutov interviewing workers about the time they spend at work at the Chernobyl AES, showing foreman Belogurov and others saying that they work as long as possible, until the dosimeter indicates 2 roentgen. Video shows radio-operated earthmoving equipment in use within the close vicinity of the reactor, followed by shots of military personnel and water trucks decontaminating affected areas. Academician Legasov is then shown saying that decontamination of the land will be a long process. Yu. A. Izrael, corresponding member of the USSR Academy of Sciences, is shown speaking about measures being taken to prevent radioactivity from reaching water and about scientific research connected with the rehabilitation of the land being undertaken.

Video shows traffic in Chernobyl streets, and Krutov says that the cinema has reopened. A mobile store serving workers in the street is shown, with Krutov saying that vodka is not on the list of goods carried by the mobile store. He denies Moscow rumors about people working at the station being given vodka. Video then shows welders and other workers at their jobs in Chernobyl, and then shows Yolshin saying that people who had fled are coming back.

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CSO: 1800/490

## SEALING REACTOR

### TEXTBOOK DESCRIPTION OF CHERNOBYL RBMK-1000 REACTOR

Moscow ARGUMENTY I FAKTY in Russian No 21, 20-26 May 86 p 5

[Article]

[Text] These days, some of the most frequently encountered words in the lexicon of Western mass information sources have become "Chernobyl," "victims," "radiation," "reactor." It is understandable that they are all presented in a specific context that defames us. For example, our victims and radiation are the highest and moreover, the radiation is the most hazardous in the world, unlike that which occurs as a result of accidents or nuclear weapons tests in the West. Reactors in the USSR, however, are the world's most imperfect, and they are also generally unknown, since everything is secret and inaccessible in this "closed society."

With regard to the first accusation. In ARGUMENTY I FAKTY No. 20, on page 2, we compared the reliability of Soviet reactors to foreign reactors and presented the authoritative opinion of a Swiss specialist. With regard to "an absence of information," here, as in all the antisoviet campaign about Chernobyl, the level of falsehood has long ago been impermissibly high.

To ascertain that this is a lie, it is sufficient to scan the literature which is published quite openly by the most diverse publishing houses of the USSR. Let us take just the textbook for students of vuzes "Design of the Main Equipment of AES," published by Energoatomizdat last year. The authors of this textbook V. M. Budov and V. A. Farafonov, on pages 134-142, discuss in detail the design of the RBMK-1000 reactor, the same one which is installed at the Chernobyl Nuclear Power Plant.

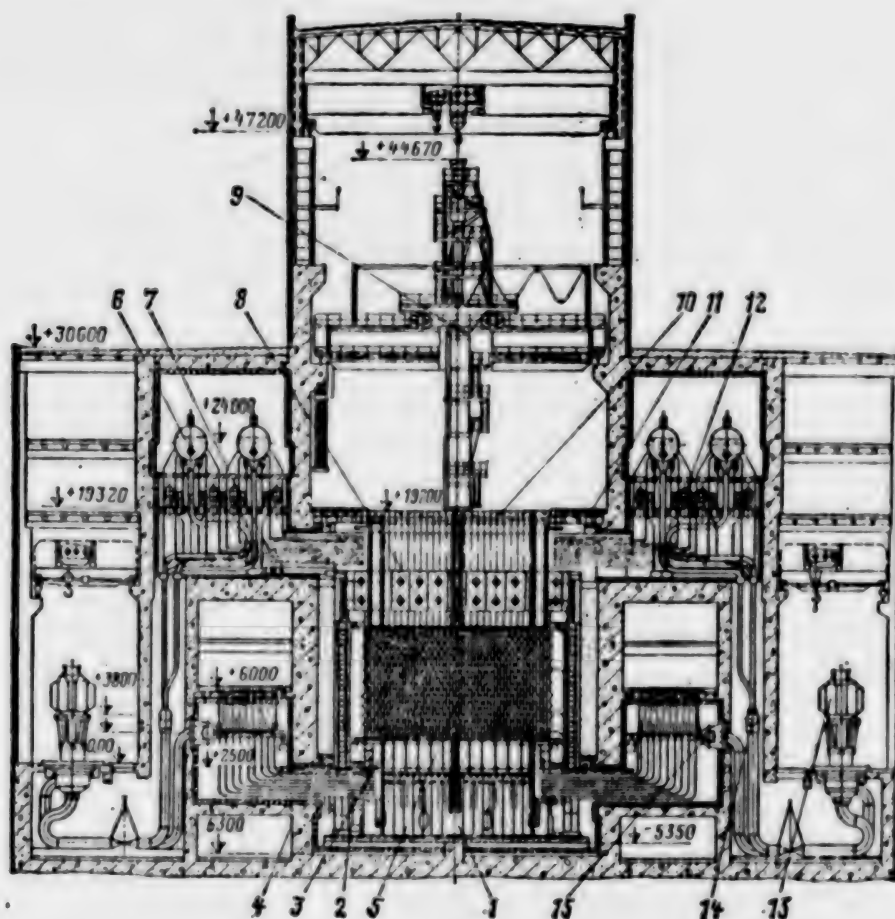
Here are its parameters, according to the textbook: electric capacity--1,000 MW, thermal capacity--3,200 MW. Number of evaporation channels--1,693, uranium charge--192 tons, percent enrichment--1.8-2, steam temperature before turbine--280°C and so on.

The development of uranium-graphite power reactors, it says in the textbook, is inseparably related to progress in nuclear engineering and the technology of reactor materials. The channel principle of design is promising from many viewpoints, the authors emphasize, since it is characterized by high reliability and survivability due to making a check of each operating channel with the possibility of deflection or replacement of individual channels without prolonged

shutdown of the reactor and by the capability of achieving significant unit power.

The RBMK-1000 reactor is located in a concrete shaft 21.6 × 21.6 m and 25.5 m high. The cylindrical graphite stacking serves as a neutron moderator. It is surrounded by a cylindrical welded housing.

The steel protective and support slabs, besides reinforcing the graphite columns, provide thermal protection of the slabs of the top and bottom assembled steel sections and are part of the biological shielding of the reactor. The mass of the graphite stacking is approximately 1,700 tons.



Overall View of RBMK-1000 Reactor:

- 1--support assembled steel section; 2--individual water pipelines;
- 3--bottom assembled steel section; 4--side biological shielding;
- 5--graphite stacking; 6--separator drum; 7--individual steam-
- water pipelines; 8--top assembled steel section; 9--loading-
- unloading machine; 10--central top cover; 11--top side cover;
- 12--fuel jacket tightness checking system; 13--main circulating
- pump; 14--intake collector; 15--delivery collector



The top cover serves as the floor of the central room and at the same time serves as the biological shielding. The design of the bottom part is in the form of metal boxes, filled with iron shot and serpentinite.

The graphite stacking is surrounded by water biological shielding, which is a circular tank with circulating water, collected from the sections. The top assembled steel section is assembled from a shell 17 m in diameter and 3 m high, to which plates are welded.

The central part of the top cover, located above the core, is a set of protective plates, made from materials based on barium-serpentinite concrete with iron powder filler. The total thickness of the plates is approximately 800 mm.

As we can see, the working principle and design features of the RBMK-1000 are discussed openly in the textbook, excerpts of which we presented.

In publishing the diagram of the reactor and a brief description of it, we wanted not only to show the open nature of this type of information, but also to inform our readers in more detail about the reactor, which has now become the center of attention of people far removed from power engineering.

6521

CSO: 1800/461

## SEALING REACTOR

### AES TEAM DRAINS RADIOACTIVE WATER POOL UNDER REACTOR

PM201025 Moscow SOVETSKAYA ROSSIYA in Russian 18 May 86 First Edition p 6

[Report for SOVETSKAYA ROSSIYA by TASS correspondents Vladimir Zhukovskiy, Vladimir Itkin, and Lev Chernenko: "Front Line of Courage"]

[Text] Kiev Oblast--Chernobyl. The city's name is no longer just a geographical concept. If you say: I am from Chernobyl, people treat you with increased attention and special respect. The term Chernobyl now unites the power industry workers' city of Pripyat, the AES itself, and the areas where people have been resettled. Chernobyl has now become a symbol of courage, strength of spirit, and incomparable heroism.

In life there is always a place for heroic exploits, as a well-known writer has said, and that is indeed so. There are new exploits every day, every minute now at the AES. The time will come when the names will be given of all those who were here and who heroically worked to subdue nuclear power that had gone out of control.

A. Grazhdankin, senior operator at the chemical shop, is well known at the AES. He has been awarded the Order of the Labor Red Banner for worker's valor. He is working at the AES now, too. He seems to be tireless. He works a 12-hour shift, returns to the camp to rest, and immediately helps people load vehicles being sent into the "zone." "I am convinced that work is the best cure for all ailments," he said. "When you feel strong in spirit you completely forget that you need sleep." When the disaster struck, Anatoliy Nikolayevich was at home. When fire broke out at the station, the experienced nuclear power worker realized immediately that there could be a disaster, there could be a discharge. He shut the windows tight, covered his sleeping granddaughter with a blanket, and went to the AES. He did all that could possibly be done. He helped the firemen, the militia, and those on the shift.

"Now that the situation is stabilizing, when it is possible to take a breather even if it is impossible to rest, you look around and realize that there are real people alongside you," the operator said. "Just like the war, situations like this are a test of a man's true worth. We now view faintheartedness, weakness, and shirking as desertion." A. Antoshin was a scout in the war; he took part in the liberation of the Ukraine and Kiev,

and his wartime travels took him through Polesye and Pripyat, where the veteran now works.

Our enemies nurtured the hope that after the war our country would long be unable to rise from the ruins, but we rebuilt it in an unprecedentedly short time," he said. "They 'predicted' that the Chernobyl AES accident would demoralize us, would cause panic and disorder. But even in this most complex situation our human fortitude saw us through this stern test." And that is something that you still see at Chernobyl--people's unity. Veterans stand alongside youth, the wisdom of experience and limitless courage. And another point: We have not seen any gloomy faces here. Tired faces, yes, but still smiling. Like V. Nozdrin, for instance, who took his An-30 up in the air. For the third time in a day. His task was difficult. And he was working in a zone of considerable radioactivity. He nodded at us in a carefree, youthful way and...smiled. Q. Rybolov, specialist of the "Gidroyekt" institute named for Zhuk, is now preparing the most complex documentation concerning the rebuilding of the station. A host of problems. And he says with a smile:

[PM201027] "I understand, we engineers and technicians who know about the nuclear power industry spend days at a time poring over designs and calculations. We argue and put forward ideas. People hurry us along. Who are they? Typists, copyists. Send them to the work front, then they would see what it is like...." A. Kupriyanov, assistant deputy chairman of the USSR Council of Ministers, does not limit himself to his official duties. He is a man with thousands of concerns. But he has found time not only to visit the station but also to work there; he went up in a helicopter over the AES and resolved questions with scientists, transport workers, and medical workers. And during all this you have to cheer people up and reassure them. So you smile at them. The effect is startling! The disaster which struck here brought all those now at the station closer together. People do not stand on ceremony here. Construction workers and ministers, major scientists and operators are on equal terms with one another, devoting all their experience, ability, and knowledge to the cause. We have seen ministers, scientists of world renown, and military leaders here. Questions are resolved promptly, responsibly. We have seen custom-built machinery and automatic manipulators here, working without people in an extreme situation. But once again we have seen the truth for ourselves: No one and nothing will ever replace people.

A. Kedrov, deputy chief of number three reactor shop, is not in today's shift. He is in Moscow. The people now manning the station control panel sent the engineer to the capital to bid farewell on behalf of all of them, their friends and comrades, to Aleksandr Akimov, shift chief of the No 4 power unit, and Anatoliy Kurguza, operator in the unit's central hall. They died from burns and radiation. These men did their duty to the very end. They were loved here. An experienced engineer and an operator who was still quite young. Their place at work has not been taken by new people. The shift itself is performing what used to be their range of duties. Not because in such conditions it is not so easy to replace experienced personnel but because

these people witnessed the tragedy, they went through that hell themselves, they are invaluable. Just as in war one experienced soldier is often worth 100 rookies, and so it was here. These people do not rest. This is their front line, their advanced outpost, this is where they lost comrades, here they will stand until the very end, until victory is won.

It turned out that this very shift which had experienced the horror of the first tragedy underwent another test on which much at the station depended. After the accident, when the fire was out, the reactor became very hot. It seemed to be suspended over the so-called pool [basseyn]--the bubbler [bar-bater]--which was filling with water as a result of damage to the pipes and cooling system. To limit the effect of radiation from above, as we already know, the reactor was plugged with a huge stopper made of sand, lead, dolomite, boron, and other materials. And that was an extra load. Would the heated reactor withstand it? If it did not, the whole bulky object would collapse into the water. And then? No one had ever answered the question of what might happen. But an answer was needed immediately here.

There was an urgent need to find out how much water was in the pool, to determine its radioactivity, and to decide how to channel it away from below the reactor. Those questions were resolved in the shortest possible time. Hundreds of firefighting appliances took part in this operation, channeling the water away into a special secure place. But complacency did not set in--there was still water in the pool. There was only one way to release it--by opening two slide-valves which were under a layer of radioactive water. And if you add to that the fact that after the accident it was pitch black in the bubbler pool, which was like a huge bathtub, that the approaches leading to it were cramped and dark, and that there was a high level of radiation around it, you will understand what was required of the people who had to carry out this work.

A. Kedrov, deputy chief of the No 3 reactor shop, and D. Neboychenko, senior engineer-mechanic, set about examining the situation and ascertaining what the working conditions were like. Meanwhile, shop chief V. Grishchenko had already determined the amount of water in the second level of the pool. He had carried out that work together with N. Koryaka, senior engineer-mechanic of the No 2 reactor shop, and M. Kostygin, senior operator in the same shop. Now it was up to the people who had to open the valves.

[PM201029] B. Baranov, shift chief at the Chernobyl station, V. Besspalov, senior power unit control engineer of the No 2 turbine shop, and A. Ananenko, senior engineer-mechanic of the No 2 reactor shop, volunteered. This was how the roles were allocated: Aleksey Ananenko knew where the valves were located; he would take charge of one and show Valeriy Besspalov where the other was. Boris Baranov would help them by providing them with light.

The operation began. All three put on waterproof protective clothing [gidrokostyumi]. They now recall how they joked when they saw themselves looking like a cross between cosmonauts and divers. They took powerful searchlights with them. They had to work in respirators.



We shall quote Aleksey Ananenko's account: "I received my instructions from Grishchenko. He said that I could refuse to go. But how could I do that if I was the only one on the shift who knew where the valves were? We decided to go in a team of three. Two to work, one to observe. We considered everything in advance so as to avoid delay when working and to finish in the shortest time. We took radiation monitors and lamps. We were informed about the radiation situation above and in the water. We went along the corridor to the bubbler pool. We lit our way with lamps. There was water in the corridor, too. We moved quickly wherever there was sufficient room. When the light from the lamps fell on a pipe we rejoiced: That pipe led to the valves. We followed the pipe. But a short while later we had to abandon this 'path.' The amount of water was increasing. When the light failed we felt our way along. Then a miracle happened--we found the valve. We tried to turn it--it moved. Our hearts pounded with joy. But we could not say anything--we were wearing respirators. I showed Valeriy the other valve. It budged too. A few minutes later the characteristic noise or splashing sound was heard--the water had gone. A few minutes after that they were hugging us." That is 27-year-old Aleksey Ananenko's account of what happened. We would like to add that this operation was monitored by the entire Chernobyl AES, all the members of the government commission, and by Moscow....

People are now performing heroic deeds in Chernobyl. But 30 km away life is following its normal course. All the normal things are happening. Even weddings. A Volga car, festooned with ribbons and a rosy-cheeked doll fixed to its hood, stood waiting for the young people outside the settlement soviet. The happy couple came out onto the porch. The bride was a picture of charm itself; the groom was severe and solemn. Aleksandr Nikitenko, director of the Mlachevskaya eighth-grade school, and Alla Duritskaya, a methodologist at the rayon Young Pioneers Center, had become husband and wife. They received congratulations from their families, friends, and hundreds of little children, from their own school and center and the evacuees, who have now also become their family and friends.

Life goes on. The AES' in-house newspaper TRIBUNA ENERGETIKA has begun appearing again. The editorial office was evacuated to Ivankovsky Rayon, but the newspapers are being delivered regularly to the station and enjoy tremendous popularity here. Its correspondents put the following question to their readers: "What do you want most of all now?" Here are their answers.

Boris Ketov, an engineer says: "My son Sergey was born 9 May, Victory Day, a day of peace. I wish him and all people on earth the same thing--peace!"

T. Zalkina, an engineer, says: "Peace!"

I. Grishchik, a driver, says: "Peace!"

G. Pinchuk, a plasterer and decorator: "Peace!"

Chernobyl lives on. Chernobyl is fighting. Chernobyl will be victorious.

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CSO: 1800/447

## SEALING REACTOR

### CEMENT, LEAD DELIVERED TO ACCIDENT SITE

Kiev PRAVDA UKRAINY in Russian 18 May 86 p 3

[Article by RATAU correspondent V. Vernodubenko: "The Roads Lead to Chernobyl"]

[Text] We proceeded from Kiev to the vicinity of the Chernobyl AES [Atomic Electric Power Station] along the very same route by which the first column of more than a thousand motor vehicles went there on 26 April [as published]. That was when the drivers has received instructions to prepare to evacuate the populace of the settlement of Pripyat.

Unfolding the map, Deputy Chief of UkSSR Minavtotrans [Ministry of Motor Transport] Truck Transport Administration Yu. V. Ratushnyak indicated the route. He himself had passed by here more than once and had worked three days on the line arranging the hauling of construction materials.

Before the trip we met with V. M. Reva, the republic's first deputy minister of motor transport, who on that first day of the accident had led a motor transport column to the AES. Vitaliy Mikhaylovich recalls how the drivers had arrived at the assembly point without delay on their day off. When it was announced that people had to be helped out of trouble and they were asked who couldn't go for some reason, not one such person was found.

It took the transport workers less than four hours to evacuate people from the power workers' settlement, but even after this was done the drivers of Kiev ATP [Motor Transport Enterprises] 09123, 09124 and 09125 and of the Pripyat and Chernobyl motor transport enterprises [avtopredpriyatiye] didn't leave their work places. They each worked several shifts transporting residents of populated points near Pripyat out of the 30-km zone. The transport workers of Gosagroprom [State Committee for Agro-Industrial Affairs] UkSSR, Minpromstroy [Ministry of Industrial Construction] UkSSR, and other ministries and departments also acted selflessly in evacuating cattle, valuable equipment and materials.

When we rode up to one fork, Yu. V. Ratushnyak indicated the route bearing left. Vehicles which were to receive radiological decontamination were going in that direction to a decontamination point set up in just one day. Mason P. G. Miroshnik, excavator operator A. F. Reveda and other workers headed by N. A. Slobodyanik, chief of the Kiev Repair and construction Administration

of Avtozemstroy Trust, worked three shifts in a row in a job to which they were unaccustomed. They dug a pit and laid crushed stone and concrete slabs. Trust Manager V. A. Tidyakin filled in for a welder. Water was led in, pumps installed, a transformer hooked up, a shower made and lighting installed. N. F. Yermak, chairman of the 1 Travnaya Kolkhoz of Ivankovskiy Rayon, helped deliver necessary equipment and materials and arrange meals for the brigade. On the second day the first crews underwent decontamination here and equipment underwent radiological decontamination.

"More than 10,000 motor vehicles were processed just at the points which our enterprise helped establish," says D. I. Golubenko, chief of the Ivankov Motor Transport Enterprise of Truck Transport.

Decontamination services now are operating on the main lines. We saw dosimeter operators thoroughly "probing" the transportation along the entire route. GAI [State Motor Vehicle Inspectorate] personnel rightly noted that such measures will allow blocking the path to the spread of dust out of the zone, where decontamination work now is under way.

In these days additional personnel and equipment decontamination points are being deployed promptly in various sectors, as are transshipment points for freight, which then is delivered to the fourth power unit of the AES in special vehicles. Much is being done to intensify monitoring of equipment heading south from the direction of Chernobyl and to reduce the transport flow of vehicles northward.

There is a great deal of equipment here which arrived from various corners of our country. There is great animation at the Vilcha Railroad Station of Southwestern Railroad's Korosten Division. Tens of trucks were driving up to the railcars and loaded ones were heading for Pripyat. E. I. Vysotskiy, a driver of Kiev Motor Transport Enterprise 23063 announced that cement carriers had made 124 trips in a day's time.

That day the drivers changed their place of "registration" nearer the atomic power station. More than 100 vehicles arrived at the Tolstyy Les Railroad Station in Chernobylskiy Rayon in the 30-km zone.

"The work is organized by shift here at the new place," says I. K. Volkovinskiy, chief of the Kiev City Administration for Truck Transport. "Free meals have been arranged. The first vehicles with cement, lead and other materials have just left for the accident site. Today we are more than 600 tons ahead of the quota."

At the Tolstyy Les Station one can see how everything related by A. N. Artemenko, director of the staff for mopping up the aftermath of the Chernobyl AES accident for the Ministry of Motor Transport UkSSR, deputy minister of motor transport, is actually being done. Everyone here works without written instructions or orders, and things are going efficiently without disruptions. Transport workers of all departments are functioning in a common rhythm. All problems are quickly coordinated with the heads of Southwestern Railroad and Glavrechflot [Main Administration of the River Fleet] of the Ukraine.

There was an urgent need for spare hoses for the pumps used to deliver cement from hopper cars. While I was holding brief interviews with drivers, a message came that a vehicle with the necessary equipment already had left Odessa.

Many routes lead to Chernobyl today.

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CSO: 1800/451



## SEALING REACTOR

### NIGHT SHIFT AT CRIPPLED POWER PLANT

Kiev PRAVDA UKRAINY in Russian 11 Jun 86 p 3

[Article by PRAVDA UKRAINY correspondent A. Sokol, in Pripyat, Kiev Oblast: "The Night Shift at the AES: These Days at Chernobyl"]

[Text] A fleeting conversation was heard at the AES party committee.

"The repair workers are going on the night shift?"

"Yes. But on trifles." And after a pause: "That is, of course, if nothing comes up..."

They tried to talk me out of trying the night shift. The work is broader and will be easier in the daytime, they said. But after all the essence of the matter is not that, but the people. A person is more conspicuous under extreme circumstances.

I change into the special clothing. I've done this many times before. Boots, linens, socks are part of the white costume worn by the nuclear-power workers. First-block shift chief G. Kravchenko scrupulously assists me in adjusting the respirator "gills."

"Take this too," he said, reaching out a cotton cloth of medicinal whiteness. "It will be useful."

I stuff it into my pocket in bewilderment. What it was for I found out at night, at the plant. But that was later. Now I leave the duty-shift camp with the shift. Those leaving passed through the KPP [control and check point] quickly and tightly grouped, stretching out in a weaving stream.

The buses this time were special--anti-radiation. The workers of Lvov created them over several days. The transfers, until recently obligatory, to armored personnel carriers have passed. The exotic objects left. But they are not missed. It is incomparably more comfortable in the IAZ vehicles. And road time has been diminished.

I tried to imagine what the impending shift would be like. My thoughts converged to one: it is difficult there. But those headed there were holding animated discussions and joking. They got up from their seats, watching the vehicles that constantly flashed past the window strips, over the protective shielding. Rarely encountered equipment is headed to Chernobyl, frequently of gigantic size.

Unexpectedly and alarmingly, the ventilation stack, and behind it, the mass of the fourth unit, appeared against the sky in the shielded windows. We were at the plant.

The bus went right up to the steps of the administrative building. In the windows were elegant white shades. It was as if nothing had happened. In reality, people had returned--in special clothing and white boots, wearing respirators. Everyone hurried into the building.

Behind the duty station checking documents were corridors and corridors. There was no end to them. The frequently encountered inscription written crookedly on the wall--"drift"--was striking. Ahead was an arrow indicating the way to go. The mining "autograph" tells much. The fact that their work is difficult: people do not linger, and replace each other--the night workers did not know the way. And the main thing: one could not lose one's way in the labyrinth of the buildings. A step to the side could turn out to be cancerous, radiation does not forgive blunders.

The miners have a crucial task--to create the foundation of a "sarcophagus" under the destroyed reactor. The route to it is very tortuous. A guide is needed. But where to get him? All are busy. However, I continued to hope...

The power workers passed through the plant buildings confidently and energetically. Someone mentioned: "sanitation station." Until quite recently they left their clothes here and changed into the special clothing. Not they wear it constantly.

The plant managers have been on duty devotedly since the that very afternoon. A small crew, it is true. Everyone went to the control rooms--the central one, the unit ones, the "cleanest" buildings. Upon entering, they removed their respirators, which dangled under their chins.

I looked at the frosted indicator lights. It seemed that there were a million of them. But only some of them were lit: the reactor is stopped.

"That is, it isn't producing electricity," explains unit shift chief G. Kravchenko. "It is impossible to stop it. Once started--keep the atom maintained and obedient. Regardless of whether it is working or not..."

My interlocutor made a notation in the journal: ordinary operational discipline. Reports are required on the state of affairs. It is normal. Only it is hotter and hotter in the building: plus 32 degrees Celsius. The ventilation is not turned on, however: it is not yet cleansed of radioactive "dirt." The sweat rolled thick and fast. The napkin turned out to be to the point.

With the aid of an escort I made my way to the central control room, to the night director.

Gennadiy Mefodiyevich Vasev was on duty at the plant. In the duty-shift camp he somehow avoided me and conversations. Here he was more animated. His colleagues call him Mefodiyevich. They respect him.

"He had a wife and son at the plant," his comrades told me. "He was on duty right at the accident, but said nothing about it. A modest man..."

He also spoke sparingly on how the duty shift was going. The reactors were in the assigned mode. A little earlier our comrades had executed extremely essential operations. At the fourth unit, in the danger zone...

A telegram in the work camp told of their selflessness. I find in the notebook the names V. Pryanichnikov, A. Obushevskiy, Ye. Barankevich, V. Nesterov, V. Sumskoy, A. Savin, A. Bobrovskiy and A. Zelikov.

However difficult, the power workers set about the repair operations: preparing the startup of two units.

I observed the turbine workers. They were not in the machine room, but in their own place--at the unit control panel. Three men for the whole plant! Machinist Aleksandr Zelikov puts in place the respirator dangling at his chest, protects his eyes with glasses, and carries a dosimeter. The task would seem to be simple--have a look, inspect, report back... He is replaced by engineer Aleksandr Bocharov. The same equipment, the same complexity, only a different route. Shift Chief Anatoliy Sova goes in third.

The electrical-workers shift turned out to be one of the largest--seven men. While its chief, Viktor Lirmik, explained that most important for them was "to feed electricity, supply the work front," electrical-installation worker Vladimir Mishin returned from his rounds.

"Everything is in order," he reported. "Water is coming out."

The electrical workers are pumping it out. They are bringing closer the launch of the plant.

Sometime after midnight I was brought to the plant operational headquarters--to the so-called bunker mentioned frequently in the press. A long underground building--the most favorable for the radiation situation--was taken by the administrators from the first day of the accident, and since that time has never been empty. During the tense and acute situation, the staffs of the most varied of industries, departments and organizations have taken up residence. There was not enough space at the desks, stretching in two rows at the walls. Here sat ministers, scientists and leading specialists and authorities. The work is difficult, and tested nowhere and by no one. It was and is in full swing. Now, of course, it is a little more peaceful.

Taking advantage of the nighttime pause, I spoke with the operational duty people--V. Naydenov and B. Akimov. The former is a master repairman, and the latter is military, a major in the armed forces. When things are very tough, there is always a soldier with the plowman.

"Some think that those working at the AES are practically dead men," they say. "We are laborers. Labor now decides everything. Yes, radiation: it doesn't bite, it doesn't sting, it doesn't smell. It is dangerous. Extremely dangerous. But it can be overcome..."

I became acquainted with the final entry in the watch log. From eight in the evening to twelve midnight work was conducted in the territory around the plant. There were numbers. About people, about machinery, about cubic meters. After midnight the shift was only in the AES buildings. And in the mineshafts.

The mining detachment was a combined one, primarily from the collectives of the Donbass and Tulshchina, as well as representatives of Estonia and Vorkuta. They all have their own personnel, machinery, transport and supplies. They even have their own cafeteria. And, of course, specialists. They are a constant here.

The miners began with metro builders, transport and tunneling workers and geologists. On the surface, in the difficult radiation situation, they worked with many collectives. They are being assisted today. But the chief burden falls on the shoulders of the miners. I encountered them many times--before the shift, after it, in the dormitory, in the cafeteria. They are selfless and heroic people. Just go into the drift. I remember the terrible warning: don't take a step yourself. And there is no one to conduct you. I listened to my interlocutors.

"The miners' work is like no other. It is very difficult."

I finally succeeded in getting in touch with the drift. The manager of mining operations, the chief engineer of the 12th Administration of the Krasnoarmeyskshakhtostroy [Krasnoarmeysk Mining Construction] Trust, V. Kutniy, took the phone.

"What can you say about the work being finished up?"

"The order has been fulfilled. As always."

"Who distinguished themselves?"

"We don't single anyone out. Everyone is an overachiever, everyone undertakes whatever work we do."

During the day, USSR Ministry of the Coal Industry First Deputy Minister A. Fisun spoke thus of the miners: "They are all in battle. The central working went according to schedule. They have begun the construction of the foundation for the "sarcophagus," the so-called pillow, on which the damaged reactor should die. Much soil will have to be removed and metal and concrete



will have to be laid on the spot. We are careful of the people and periodically replace them all without exception. Over the course of a day there are eight shift changes. We are managing successfully."

Here, at the Chernobyl face, the miner-communists issued a call: "Transfer daily wages to a fund for those suffering." It was universally supported.

Morning is drawing near. At operational headquarters, concern for the approaching day is ever more tangible.

First the telephones became more animated. The most important calls could be guessed at by the responses to them.

"AES duty station! Just a minute, I'll call..."

"Hello, comrade general! I report..."

The intensive nighttime work was laid out in brief reports. The reactor is normal. The miners have observed the schedule. More than 20,000 square meters of buildings have been decontaminated. The results for the day overall were more extensive and detailed.

The building quickly filled with people. It was already hard to find the night duty officers. I remember their reply: "It is difficult to speak with anyone here in the daytime." The motor-vehicle inspectors drop in and present themselves. It is difficult to manage at the AES without them.

We left the plant. The morning sun quietly and generously spread light. Right alongside, on the approaches to the unit, equipment left for the night came alive. I tried unsuccessfully to spot the radio-controlled Chelyabinsk bulldozers. You have to know them in order to distinguish them among the mass of machinery deploying for the next assault.

Sometime toward dinner I met with E. Pozdyshev, the new AES director.

"The time for bayonet attacks has passed," he said. "Today's work requires time. It is all intense and laborious. In the spring, the first and second units must be started up and connected to the country's power system."

The sleepless night and tiredness let themselves be known. The vehicle rocked me to sleep on the way to Kiev. I had a dream: I reached the miners in the drift. I still have to get there.

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1800/468

## SEALING REACTOR

### METRO BUILDERS ASSIST WITH LIQUID NITROGEN TO COOL REACTOR

Kiev PRAVDA UKRAINY in Russian 27 May 86 p 3

[Article by RATAU correspondent K. Stelmashev under "At the Chernobyl AES" rubric: "Each Performed His Duty"]

[Text] A large group of metro builders who took part in mopping up the aftermath of the Chernobyl AES [Atomic Electric Power Station] accident returned to Kiev. For more than ten days workers and specialists labored in the immediate vicinity of the fourth unit. The important assignment was accomplished.

Now that conditions in and around the station are under control, it is worthwhile to return in thought to those not-too-distant days when the situation concealed many unexpected things. At that time the specialists were greatly worried by the condition of the red-hot reactor's foundation, overloaded with 5,000 tons of sand, dolomite and lead. The concrete of the base might not withstand the high temperature. It was necessary to urgently adjust the cooling of this zone as well and to strengthen the foundation. It was decided to dig a pit, using the adjacent third unit building as cover, to bore 160 m horizontal wells from there and supply liquid nitrogen through pipes to the base of the damaged reactor. Kiev metro builders took part in accomplishing this task.

"News of the assignment came during the dinner break when our shift was on the surface," says Viktor Ivanovich Bilko, brigade leader of a Komsomol-youth collective of tunnelers of Tunnel Detachment No 14. "Everyone was ready to go, but only 14 persons were needed on the first day. Later just as many came to replace them. We were given two hours to assemble. By evening we were the first of the metro builders to be already on site."

The vacation facility of the Film Studio imeni A. P. Dovzhenko where they were located is in the forest 16 km from the AES. It seems a stone's throw, but the trip to and from the shift would take four hours with transfers from one vehicle to another. It took another two hours to bathe and change clothes. Colleagues jokingly called the lads from Tunnel Detachment No 14 the "commandant's platoon." Having arrived first, they assumed the cares of settling the arriving metro builders, receiving and issuing overalls and

organizing leisure time. But they became warehousemen and movie technicians only in time off from shift. Their principal concern, as it was for everyone, was there in the zone...

The radiation was enormously higher within tens of meters of the pit, nearer the fourth unit. But here "in the shadow" of the concrete building where people labored day and night, its level permitted working without special apprehension--of course, using all measures of precaution, and for a strictly limited time.

"On the first day, when the outlines of the future pit were just beginning to show, the shift consisted of six persons," says tunneler Nikolay Ivanovich Gordiyenko, the sector's party group organizer. "Each of us had to work with great intensity. Aleksandr Grigoryevich Martynenko had an especially great deal to do. The electrician's [elektroslesar] experienced hands were needed everywhere..."

These hours decided a great deal. The faster and deeper people got away from the surface, the greater their safety: the radiation level dropped here. Now when you ask them what they thought about there in the zone, everyone answers almost the same: about one thing--to be able to do as much as possible in the time allotted. There was no thought of danger. Only the protective wrappings --"petals" ["lepestki"]--and the black bits of graphite lying some distance away gave a reminder of it.

"We were more annoyed by the mosquitoes," smiled A. G. Martynenko. "A horde of them appeared there..."

Twenty-ton concrete blocks, the former foundation of a heavy crane which installed the third unit, turned up in the ground in the very place where they were digging the pit. Drilling blast holes in them and blowing them up meant a loss of time and extra dust. They found a solution: they hooked onto the structures with cables and several powerful bulldozers in tandem quickly dragged them aside.

Then the pit was ready and the walls reinforced with steel piles. They began to drill the wells at a depth of around six meters. They already had gone part of the way to the damaged unit when the situation changed. The work of cooling the reactor, which has not let up for a minute, produced results. It had begun to cool noticeably and the temperature no longer inspired fears about the strength of the base. The government commission decided to shift to the next phase of work--to create a thick concrete pad beneath the reactor which would become the bottom of a future "sarcophagus." Now tunneling intended for pumping in concrete began from here, from the pit covered by a "roof" of concrete panels for protection against radioactive dust. Miners arrived to replace the metro builders...

"Those who worked in the station zone returned home," says Fedor Ivanovich Yuzva, secretary of the Kievmetrostroy party committee, who also was there all the days. the days. "But there is already a new assignment and the next group of metro builders is preparing to travel to the station to continue the work of mopping up the aftermath of the accident."

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CSO: 1800/451

## SEALING REACTOR

### REPORT ON MINERS' WORK TO REPAIR CHERNOBYL AES

LD191725 Moscow Domestic Service in Russian 1500 GMT 19 May 86

[Report from the Chernobyl AES by correspondent Vladimir Mikhaylenko]

[Text] Workers on different shifts make their way into the special zone of Chernobyl AES each in its own way: some in the Ikarus buses, others in armored personnel carriers. Everything depends on where they are going. Construction and power industry workers, military subunits, and miners' teams are carrying out emergency repair work at the station. Journalists, in principle, are also allowed in the pit where the underground passage to the destroyed reactor begins, but Nikolay Stepanovich Bureko, in charge of this work, head of the Donetskshakhtostroy Combine, is categorically against it: "I will not let anyone into the mining operations area. All you need is 15 minutes, but in that time we will lose one reinforcement ring." These reinforcement rings are put in place in the wake of the tunnel shield, to line the sand along the underground passage to the fourth power unit. The width of a complete ring is only 35 cm. The more a shift assembles and installs such rings, the nearer to the target one gets. Vyacheslav Konovalov's team was the first to attain the present rate of work: five concrete rings per shift.

If everyone gets going like that, noted Petr Mikhaylovich Bigma, deputy minister of Ukrainian coal industry, we shall drill between 14 and 15 meters a day. This is double the record indicator attained under normal conditions.

Joint drillers' teams from Donetsk and Moscow Oblast are currently working in the most crucial direction; they are all volunteers and, as a rule, communists and Komsomol members.

Miners quickly and thoroughly settled in Chernobyl's boarding school; it is here that they live; it is here that they opened a canteen seating 250; and it is also here that they have a first aid post and radiation monitoring posts.

Miners' shifts replace each other every 3 hours in the underground mining operations' area, fulfilling the tasks that have been set in a cool-headed and courageous manner.

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CSO: 1800/447



## SEALING REACTOR

### TROOPS WORK TO CHECK CONTAMINATION

PM191538 Moscow KRSNAYA ZVEZDA in Russian 18 May 86 Second Edition p 1

[Correspondent Lieutenant Colonel A. Polyakov report under the rubric "Place of Feat--the Chernobyl AES:" "Posts on the Route"]

[Text] A red flag stood out over the asphalted route like a traffic light signal prohibiting traffic. Our vehicle stopped at the edge of the asphalt. Driving onto the side of the road is categorically forbidden. You are reminded of this by special roadside signs for the whole 20 km that we had covered from Chernobyl to the start of the "clean zone." For contaminated dust settles on the wheels and rises into the air. And one of the most important tasks now is not to pollute new areas. To this end special transshipment bases are being constructed on the borderline between the zones, to where trucks deliver all freight and do not proceed into the contaminated zone. Radiation monitoring has been stepped up. There are very tough demands on the radiation "purity" of equipment.

Private A. Shmatko, chemical soldier and radiation checker, used an instrument to check the level of contamination of our vehicle's wheels. He practiced his "witchcraft" particularly carefully and at length on the rear wheels. Experience shows that that is where the level of radiation is higher. I put on the instrument's headphone and heard the gentle crackling increase slightly. The instrument is very sensitive, but the needle was deflected only a few degrees.

"You can go," Pvt Shmatko smiled. "It's hardly higher than the background level..." "Aren't you sorry to have given up your leave?" I asked the soldier.

He was so surprised he did not know what to say. I could see in his eyes the question: How do you know? And, evidently having guessed, he replied with conviction: "There is still time..." We had already had a detailed discussion with Senior Lieutenant A. Grom, commander of a special treatment company.

"However many good words we say about our subordinates," he said, "believe me, people will always be just that little bit better." And he had spoken about Pvt Shmatko, who was standing before us now--short in stature and with a smiling, dark-complexioned face. The commander had authorized short-term leave for him, and all the necessary documents had been prepared. And then the subunit received the unexpected order to travel to the region of the accident at the station. Shmatko himself went to the company commander:

"Permission not to go on leave. You understand, I cannot do otherwise..."  
"At such times you are particularly pleased with our splendid young people,"  
Sr Lt Grom had said in an almost wavering voice.

Educated on the excellent examples of the Great Patriotic War heroes and the Soviet servicemen fulfilling their international duty in Afghanistan, the servicemen here are revealing in selfless, heroic work the innermost depths of the Soviet person's soul and his readiness to sacrifice himself in order to divert misfortune from the motherland.

I wanted to speak some more with Pvt Shmatko, but a column of powerful trucks had already approached us. Some of them turned onto a separate concreted area. The special treatment point was sited there, where Sr Lt Grom's subordinates at once set about their work.

Private V. Shinkarenko wetted the contaminated equipment with a special solution and then rubbed it over from top to bottom with brushes. Privates I. Govorukhin, S. Panchenko, and V. Filippenko, chemical soldiers, washed the truck. It is not easy work. For hours on end, almost without letup, washing, rubbing, cleaning... "We work right round the clock, taking turns," Pvt Panchenko said, taking off his light-blue rubber glove and wiping the beads of sweat from his brow. "Sometimes we decontaminate more than 200 vehicles in eight hours..." And this while wearing protective means which make it difficult to move and restrict the intake of air. But there, at that post, things struck me as being a little easier. The crews felt less fettered and freer. There was not the psychological stress which chemical servicemen feel at the first "cordon," where vehicles come right after working at the AES. The first "cordon" is less than 10 km from the station. An asphalted road leads to it. The branches at the tops of the trees growing on both sides of the road join overhead, forming a beautiful green tunnel. How pleasant it would have been to drive through there just a few weeks ago. But now, as a result of the constant washing with water, the dark asphalt brings to mind other, less idle thoughts.

The post's usual complement here is a militia worker, a radiation checker, and crews of special vehicles. It is amazing how a misfortune mobilizes people and how it highlights their readiness to carry out the most difficult and dangerous work without outward ostentation or unnecessary words. Of course, all surprises are ruled out here, but everyone understands that he must approach contaminated equipment every day. And do so readily. And this readiness is displayed, above all, by Lieutenant I. Popov, company commander, who frequently helps his subordinates himself. Senior Lieutenant V. Kovalev, platoon commander, directs people skillfully, while Private First Class B. Bukhalo, radiation checker, and Sergeants G. Chernykh and N. Makar, chemical soldiers, are beyond the highest praise.

"Our commanders and political workers keep scrupulous records of the events of every day," Major General V. Tyurin, chief of Kiev Military District's chemical troops, said. "We do not have the right to overlook a single lofty impulse, noble deed, or example of selfless labor in this extreme situation. Chemical servicemen and, of course, not they alone," Viktor Mikhaylovich continued, "display high professional skill and are ready to fulfill the set

task in spite of everything. At the same time, we live a full life, without alluding to the difficulties of life in the field." Before leaving the chemical soldiers, I called on Sr Lt Grom in the camp. Tents were lined up in neat rows in a forest clearing. There was no respite from the mosquitoes. Brushing them aside, Sr Lt Grom had his head bent over a table made of planks, and his hand was neatly writing: "Dear Linda Avgustovna! Your son Tynu Arvoyevich Tasso, fulfilling the task of eliminating the accident at the Chernobyl AES, is acting selflessly..." And alongside there lay an envelope with the address: "The Estonian SSR..." Sr Lt Grom tore himself away from the letter and wearily passed his hand through his thick hair touched with an early streak of gray. And I could not help thinking that these difficult days and nights and the continuous duty at the posts will probably give the company commander more gray hairs.

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CSO: 1800/450

## SEALING REACTOR

### PLANT ROAD BEING WIDENED TO AVOID DUST CONTAMINATION

LD212146 Moscow Domestic Service in Russian 1500 GMT 21 May 86

[Report by "special correspondent" Vladimir Mikhaylenko from Chernobyl]

[Excerpts] The pace of life and the rhythm of work in the 30 km zone around the Chernobyl atomic power station is increasing and growing with every passing day. The country is concentrating more and more efforts here to eliminate the consequences of the breakdown on the tightest possible schedule and within the shortest possible time and to return the special area to normal life. Freight for the zone is being brought in by railway, by air, and by the main waterways of the country. But the bulk of all transportation, in the final analysis, falls on motor transport: dump trucks, water carriers, concrete mixers, cement carriers, fueling trucks, cranes. On the last 10 km section of the road leading from Chernobyl to Pripyat you can see every kind of motor vehicle. Yuriy Vladimirovich Sharatushnyak, who is here in Chernobyl and manages the motor transport service of the republic's civil defense, is talking to the drivers who have just driven into the special zone.

Yuriy Vladimirovich, what kind of work are you doing these days?

[Sharatushnyak] Our transport columns now need to bring in a large quantity of gravel and asphalt.

[Mikhaylenko] Are you widening the road here because it is too narrow, too crowded, or in order somehow to make traffic itself more safe?

[Sharatushnyak] In order to make transport work more safe. So that traffic will not drive on the shoulder and create dust. Since the system of vigorous decontamination is not yet over the task is very tight. I think that in the course of some 5-10 days, we will solve this problem and then this zone will be completely safe for work.

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CSO: 1800/450



## SEALING REACTOR

### EFFORTS TO CONTAIN RADIOACTIVE DUST DESCRIBED

PH300910 Moscow TRUD in Russian 22 May 86 p 4

[Own correspondent S. Prokopchuk report from the Chernobyl AES area under the rubric "We Report the Details": "Above and Around 'No. 4'"]

[Text] Glistening in the sun, the huge white sacks scattered over the green blanket of the airfield resembled quilts put out on the grass to air by a conscientious housewife. One was tempted to lie down on them and contemplate the blue cloudless sky above Chernobyl. However, Lieutenant V. Sokolov called me back to the realm of reality: "We will begin work in 10 minutes. The helicopters are approaching, they are about to land." Work means dumping special loads in the zone of the damaged reactor. Not into the crater any more, but around it, along the perimeter. The plug of sand and clay, lead and dolomite, boron and other materials weighing several thousand metric tons with which the helicoptermen reliably stopped up the spewing sewer of "No. 4" is doing its job now. The exhalations of the damaged unit are dying down. But the heaps of contaminated debris remain. Indeed, the territory of the operational area of the AES is literally covered with it in a number of places. Everything must be removed. This is an incredibly difficult task. It is particularly difficult to contain the radioactive dust. And it is the white "quilts" which I mentioned at the beginning of my report which are to help to "pin down" this dust. Instead of feathers they contain liquid synthetic rubber which solidifies on contact with the air, covering the contaminated areas reliably with a film. The spreading of this film has again been entrusted to the helicoptermen.

The blades of the propeller turn faster and faster. The helicopter is already hovering a few meters above the ground. Now it is necessary to attach a bundle of three sacks to the helicopter and then (and this is very important) the helicopter must make a precise vertical take-off. After all, the cargo is in a fragile wrapping, polythene bags, that is. You only have to drag it a meter or two along the field and the bag may burst. This is yet to happen to Major A. Voropayev.

The 4 meter rope uncoils slowly, smoothly and then the "quilt" lifts off almost imperceptibly, as it were.

Clockwork precision, that is the only way to describe it, officer V. Vorobyev says.

Now the helicopter rises and heads straight for the power station. It is no distance at all. The territory of the AES extends before us as if it were in the palm of our hand. Equipment and people near the administrative block are clearly visible.

"Target in sight," I hear Voropayev's voice through the loudspeaker reporting to the control point which is directing the dumping operation. The control point is located in the vicinity of the damaged reactor. Today the work is being directed by officers N. Inozemtsev and V. Maslov. Both are highly experienced pilots who were among the first to arrive in Chernobyl and have been engaged in the fight to tame the No. 4 unit for almost a month now. I met them an hour ago at the airfield.

"Permission to approach the target granted," I recognize Maslov's calm voice.

Silence, as seconds of agonizing suspense tick by.

"Distance 800..." "Distance 100. Get ready." "Let go." An instant later the "quilt" descends on to the target next to the crater of the reactor. The jets of liquid rising from the bursting sacks are clearly visible as another batch of the liquid covers the roof, wall, and heaps of debris near the white building.

Within a couple of minutes the helicopters of Captains V. Agafonov and A. Pupochnik take off.

Meanwhile in the operational area of the AES where we are now, having left the helicoptermen, an intensive struggle to eliminate the consequences of the accident is underway. Servicemen and workers are conducting decontamination operations directly in the special zone. Through the vision slits of the armored vehicle we can see how the remote-controlled powerful bulldozer, the creation of the Chelyabinsk tractor builders and the Zemstroydormash association collective, silently obeys people's instructions.

So far only this kind of robot equipment and machines clad with lead sheeting and strong armor affording reliable protection from radiation are allowed to operate in the immediate vicinity of the ruins of the No. 4 unit. Areas of the AES territory which have been polluted with minor emissions and radioactive dust are being decontaminated by another method using absorption film, also known as decontamination film. In its solid state it resembles the ordinary polythene used for making bags. It is applied in its liquid form by spraying onto the affected surfaces. When it solidifies it grips the dust and other "rubbish" so firmly that the film which has formed can be "rolled up" like a carpet and transported to places where it is buried.

These efforts have contributed considerably to a sharp drop in background radiation in the 30 km zone. In the Ukrainian capital, as A. Romanenko, Ukrainian minister of health, has emphasized, it poses absolutely no danger to people's health.

Chemical workers are doing a great deal to help the republic in the decontamination of the territory, buildings, and equipment of the Chernobyl AAS and also of the population centers in the immediate vicinity of the station. Literally within a matter of hours they organized the mass production of decontamination solution which had previously been produced only in small quantities...

"We have already dispatched several tank-trucks to Chernobyl," Vladimir Andreyevich Kasyanov, deputy chief engineer of the enterprise, told me when I called him. "In the near future we will double production of this substance."

"In order to be able to do this the plant's workers had to install and start up within the shortest possible time completely new equipment intended for a different purpose and to adapt existing equipment."

"Please, say a good word in the newspaper about Anatoliy Nikolayevich Dmitriyev's maintenance fitters team, the group of electricians headed by foreman Vladimir Sergeyevich Shmygaylo, and the group of fitters headed by shop chief Boris Vasilyevich Doroshenko. They practically did not leave the shops, understanding how important the fulfillment of this order was." Well, here I comply with this request: Many thanks to you, comrades, from the Chernobyl people and all those who have been temporarily evacuated from the 30 km zone and are waiting to return to their apartments and houses. You have brought this day much nearer.

On my way to Kiev I could not resist the temptation of calling at one of the kolkhozes nearest to Pripyat. It is located within the evacuation zone. Decontamination operations are in full swing at the livestock unit. Powerful bulldozers and earth-moving equipment are removing the contaminated layers of soil. Specialists are treating buildings with the necessary solutions. Radiation monitors are carefully checking the ground, houses, and outbuildings with their instruments...Everyone is working very hard.

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CSO 1200/450

## SEALING REACTOR

### REACTOR COOLED BY TEAM COMPOSED OF SERVICEMEN

PMO20953 [Editorial Report] Moscow KRASNAYA ZVEZDA in Russian 24 May 1986 Second Edition front-page under the rubric "Chernobyl AES: Test of Courage" and the headline "At Reactor Unit Four" a 2,100-word article by special correspondent Colonel V. Filatov on the activities in the Chernobyl zone. The article begins: "In an interview with Central TV a representative of the State Commission on the Elimination of the Consequences of the Chernobyl AES Accident said that a team engaged on cooling the reactor is working in direct proximity to reactor unit four. This is taking place in such a way that cooled nitrogen is being pumped under the reactor around the clock. I asked what the people in this team of daredevils were like. It turned out that the team is wholly composed of servicemen; the group is commanded by a captain with two warrant officers, two privates first class, and four privates in the group. The following detail also came to light: Food is delivered from Chernobyl by truck three times a day--in the morning, at lunchtime, and in the evening. Today the lunch was to be brought in by Major V. Savichev.

"There was no room for me in the truck. It was full of sealed tanks of food and flat-top crates containing, so I understood, bread and cutlery. In addition, there were two officers in the truck--Lieutenant Colonels A. Kushnin and Yu. Ustinov--who had their own tasks at the AES. And yet we managed--Major V. Savichev drove.

"Lt Col Kushnin had a roentgenometer on his knee and was monitoring the needle movements. We passed dump trucks and concrete mixers coming from the AES; the faces of the drivers were only half visible--they were all wearing respirators. For those working on the AES territory and nearby speed has become a reliable weapon of defense, because the less time you spend in the radiation zone the lower the radiation dose you receive. We also passed trucks traveling at top speed. I remember how someone in Moscow--I will not name him--told me the fairytale that here drivers down a shot of vodka before each trip, allegedly to help them. From the medical viewpoint it is absurd. And taking into account the very high speeds of the loaded trucks? Even more absurd.

"We passed a spraying truck and then another. The asphalt gleamed in the sunshine. We should have been happy, but we were not: There are plywood fences along each side of the road with the words 'Do not pull over. Contaminated.'



"The needle's moving over to the right, further and further,' Kushnin reported, watching the indications of the instrument resting on his knee. Savichev stepped on the gas.

"Outside we occasionally saw radiation control posts. We were not checked but all trucks returning from the AES are stopped. On the left are two special treatment centers. The decontamination of trucks which have been contaminated above the permissible norms was underway. To jump ahead, I will say that when we were returning from the AES we also turned into one of these areas and the truck was washed down in the most painstaking fashion. So a 'dirty' truck cannot even reach Chernobyl, let alone somewhere further away from the AES. There are the strictest procedures about that here.

"The needle's gone further over, further over....'

"And as if on command, Savichev speeded up and shortly after slowed down when Kushnin reported yet again: 'It's gone back to the left....'

"How is this movement of the measuring device needle to be explained? By the fact that radioactive material fell on the area in the oddest manner.

[PM020955] "Two tall AES smokestacks appeared over the forest. One smooth turn and the entire AES was in front of us. We were again struck by the numbers of people around. Firemen stood alongside their trucks; water gushed simultaneously from several nozzles. Further ahead some kind of crates were being unpacked; further on again welders were at work.... We drove up to the AES main administration building. The entire area in front of it was crammed with equipment--from lift trucks to our military armored personnel carriers.

"At the hall entrance there was a metal box containing wet sacking for wiping one's feet, so as not to bring dust into the premises. We passed the box and went further on--into the AES hall. And we were again struck by the numbers of people. They were all in identical specialized clothing, but when you looked closer you saw that they differed both in age and other things--there were women's faces among them. Several people, like sappers with mine detectors, moved slowly among the rushing people, with probes pointing downward and devices--radiation meters--on their chests. I was told that measurements are constantly being taken on all floors and stairwells.

"We went through several radiation measuring posts; through the windows and the many glass doors we could see that people were at work almost everywhere outside. From the ground floor we went downstairs into the basement. It is not far down. And we immediately entered a world of two-tiered bunks and long dining tables in the passageways between them. It was like the crew's quarters on a large warship. People were sleeping on many of the bunks. I was told that these were people who had come off shift.

"Here I met with Captain Sergey Viktorovich Polyanskiy and his subordinates, all dressed alike in special white canvas suits with large pockets, white caps like surgeons, and special white boots. In Chernobyl ministers, academicians, generals, engineers, installation workers, subway builders, and high-speed drilling foremen are all dressed exactly the same. They are all working on the same job...."

The remainder of the article consists of descriptions of the servicemen working on Polyanskiy's team.

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CSO: 1800/447

## SEALING REACTOR

### WORKERS BURY DAMAGED REACTOR IN CONCRETE

LD210949 Moscow Domestic Service in Russian 0600 GMT 21 May 86

[Text] Concrete for Chernobyl AES—a report from our special correspondent Vladimir Sokolov:

They say that this concrete works of Yuzhatomenergostroy in Vyshgorod near Kiev has never worked at such pressure, nonstop, before. However, in order to bury the fourth stricken set at the Chernobyl AES in an impenetrable sarcophagus, as the scientists have called it, a great deal of concrete is needed. For this purpose, a number of the enterprises in Kiev have been mobilized. A dry concrete mixture with water is being sent for Pripyat, and concrete-mixing vehicles are setting off from here, from Vyshgorod, in an uninterrupted flow along the road. These powerful machines, equipped with concrete mixers, are capable of operating while they are moving. Yuriy Ivanovich Kolesnik the director of the plant, says that this is perhaps the largest production facility for concrete.

We now have about 250 concrete mixing vehicles [avtobetonnosmesiteli] carrying a concrete mixture. We did not even expect such a vast geography; there are vehicles here from Khmel'nitskaya AES, from Yuzhno-Ukrainskaya AES, from Rovno AES, from Kursk AES. Apart from that, there are vehicles from Latvia, from Bashkir ASSR, from Rostov-on-Don, from Donetsk. In general—from a great many places.

[Sokolov] So, by this morning, how much concrete, approximately?

[Kolesnik] By this morning we had handed over 9,500 cubic meters.

[Sokolov] And how much was your monthly productivity in normal times?

[Kolesnik] We were handing over approximately 4,000 a month. In these 10 days, we have already done the quota for 2 months. Our people have, of course, demonstrated complete understanding of the situation that has arisen. In the first days, we were working 12 hours each. Then we got reinforcements of workers from our Chernobyl branch.

[Sokolov] It is more difficult to talk to the drivers of the concrete mixers. Their time is limited. But I am interested in a whole group here—where are you from?

[First speaker] From Kursk.

[Sokolov] And you?

[Second speaker] From the Kursk [AES].

[Sokolov] How many vehicles have arrived from there?

[First speaker] Ten vehicles of ours have arrived. We have been here since the second of the month.

[Sokolov] And where are you delivering it to?

[Second speaker] To the Chernobyl kopachi [slang for digging works].

[Sokolov] That is already in the danger zone.

[Second speaker] Yes.

[Sokolov] And what happens to your concrete then?

[First speaker] Well, then they carry it to the reactor in dump trucks.

[Sokolov] How many trips do you manage to make? What is the distance from here?

[First speaker] [It is] 140 kilometers. We manage to make three trips in 24 hours.

[Second speaker] By a roundabout route, of course [na dlinnoye plecho].

[First speaker] It is a long road, an arduous road.

[Sokolov] And once again convoys of concrete mixers set off along that road. The Chernobyl [AES] today needs concrete more than all other deliveries.

/9365

CSO: 1800/447



## SEALING REACTOR

### UPDATE ON ENTOMBMENT OF STRICKEN REACTOR

Moscow SIROITELNAYA GAZETA in Russian 1 Jun 86 p 3

[Article by SIROITELNAYA GAZETA special correspondent G. Dolzhenko, from the area of the Chernobyl AES: "The Force of Spiritual Energy"]

[Text] The tense situation at Chernobyl is abating gradually. The business-like news from the plant and the evacuation zone is ever more peaceful. Of course, regular reports in the press and on radio and television, along with the explanations of physicians, planners and scientists, have played their own role. But chief merit belongs to those who today are continuing to tame the atom, to drive back into the bottle the suddenly escaped terrible genie.

One of the most tense sections at the plant is the covering of the contaminated surface with concrete. It must be stated that the level of radiation is not the same everywhere, and pockets of it are scattered about the entire territory where fragments of graphite and reactor wall fell after the explosion. And it happens that in one place the dose of radiation is high, and there is nothing alongside. The drivers of USSR Minenergo [Ministry of Power and Electrification] are operating harmoniously and precisely until it is second nature.

"Our guys are working in excellent fashion," says Yuzhatomenergostroy [Southern Nuclear Power Construction] Association party organization secretary N. Gritsenko. "But I would especially like to note V. Melnik, N. Kryachok, I. Petruk and I. Bulgakov. They voluntarily work 12 or more hours a day. You wonder where they get so much endurance. Sometimes I ask them: maybe you're tired and will rest a few days? They answer: we'll rest afterward."

The transport conveyor feeding emergency blocks of concrete, water and other materials along its arteries is not still for a second. In order to accelerate the work, USSR Minenergo decided to develop three more concrete plants right on the decontaminated territory of the plant—the sarcophagus for the reactor will be enormous. For now the concrete is being produced by the plants of USSR Minpromstroy [Ministry of Industrial Construction], Glavkievgorstroy [Kiev Urban Construction Main Administration], Yuzhzaptransstroy [Southwestern Transportation Construction Trust] and Yuzhenergomontazh [Southern Power Equipment Installation Trust] of USSR Minenergo. The enterprises are operating with full, almost unbelievable

loads, around the clock. There are many other good examples here. Questions--technical, financial, organizational--are decided on the move, without bureaucratic hitches and delays. At USSR Gosnab headquarters I observed the work of Deputy Chairman A. K. Minchenko for some time. In just a few moments, questions of transporting materials, machinery and equipment in very short supply to the nuclear plant were resolved.

"The whole country is helping us," said Anatoliy Kalenikovich, tearing himself away from his business for a moment. "Everything is put on the back burner. Yesterday, 20 forty-ton trailers were needed at the plant. Not very many of them are made in the country, but literally in days the necessary quantity was delivered by priority train. It's the same with rolled metal, instruments and many other things."

The construction administration of the AES [nuclear power station] has already set about fulfilling the next important task: closing off the destroyed portion of the reactor. The Kiev Experimental Structural Elements Plant of USSR Minenergo is already finishing up the manufacture of forms. The supply of a total of 17 30-ton blocks is projected.

At the same time, the Chernobyl, Pripyat, South Ukrainian and Kiev installation administrations of the Yuzhteploenergomontazh [Southern Thermal Power Equipment Installation] Trust developed the construction of additional decontaminated points.

Reports arrive every day on the stages of construction that are completed. A report came in not long ago on the full blocking of the storm water in the contaminated zone. The blockade ring around the heart of the catastrophe is being drawn ever tighter, and the attack on the atom that got out of the control of man is being conducted ever more extensively. The force of the spirit of the Soviet people is set off against the force of nuclear power. No other power can compare to it. At difficult times, our people rally more closely around the Communist Party, derive confidence in victory from it, and learn to live and fight. Applications to be accepted into the ranks of the communists are a customary phenomenon these days at the nuclear plant. Aleksey Ripa of the transportation association of Yuzhatomenergostroy Trust handed one in as well. From the very beginning of the emergency, he has continuously transported special shifts to Chernobyl, and he had not a single failure on this difficult road--the road of courage.

12821

CSO: 1800/468

## SEALING REACTOR

### VOLUNTEERS BUILD ACCESS ROUTE TO CRIPPLED PLANT

Kiev PRAVDA UKRAINY in Russian 25 May 86 p 3

[Article by R. Mulevich, engineer of Orgodorstroy Trust of Mindorstroy  
[Ministry of Highway Construction and Maintenance] UkSSR: "The Road to the  
Reactor"]

[Text] Along with the specialists taking part in mopping up the aftermath of the Chernobyl AES [Atomic Electric Power Station] accident, collectives of the republic's Ministry of Highway Construction and Maintenance also are performing a large amount of work in the area. They built a 1-1/2 km access route to the damaged forth power unit in extremely compressed time periods, and now have shortened the road used to deliver necessary freight to the reactor by almost 8 km.

"We asked for volunteers to lay the road in the immediate vicinity of the accident site," says V. M. Klimenko, chief engineer of Ivankov Road Construction Administration No 39 of the Kievdorstroy-2 Trust, "but not one person refused to perform this responsible assignment.

"All necessary measures were taken for the people's safety: constant radiation monitoring and a daily change of overalls, footwear and respirators. Medical personnel permitted each person to remain at the facility for a matter of hours. The road was built in four days. Labor productivity exceeded the usual by severalfold. While previously we laid 300-350 tons of asphalt concrete in a shift, we laid 1,559 tons on the last day of the access route's construction."

The road construction personnel's responsibilities did not decrease in subsequent days. Two special areas were built for radiological decontamination of transport arriving from the vicinity of the AES. Subunits of the Kievdorstroy-2 Trust just completed constructing areas for freight near the boundary of the 30-km zone where freight intended for the Chernobyl AES will be transloaded to to transport operating in the zone.

6904/13045

CSO: 1800/451

## SEALING REACTOR

### CHERNOBYL RAILROAD STATION ORDERED SHUT ON 29 MAY

Moscow GUDOK in Russian 19 Jun 86 p 3

[Article by GUDOK correspondent V. Denisenko, Kiev: "Days and Nights in Chernobyl: Our Correspondent Tells How the Railroad Workers Delivered Freight to the Chernobyl Nuclear Power Plant"]

[Excerpts] It is a springtime night, fresh and fragrant. It is quiet and calm at the station, with no people around. Only Marchenko and the people on duty at the switch posts painstakingly meet and accompany the through trains. A diesel switching locomotive is breathing evenly on a dead-end siding...

Pavel Grigoryevich heard something: the station duty officer's radio set was wheezing. Marchenko heard: there had been an accident at the nuclear power plant.

"What should we do?" engineer Aleksey Butenko tried to elicit at that time from the shift commander. Another person who was awaiting orders was train marshall Anatoliy Khvesko, holding the radio set tightly to his ear...

"Take the tankcars out to the petroleum base," Marchenko told the marshalling brigade, "and then come back as soon as you can. We'll try to keep the station clear. So don't just drift along there. If I find out anything, I'll tell you."

He ordered the people on duty at the switch posts to prepare to receive a passenger train and then he walked out to the steps. It was becoming light. The firemen had beaten back the flame that had burst out at the third power unit, but a light-blue candle, many meters tall, still rose above the fourth unit. It was less than three kilometers straight ahead to the power unit. It appeared that there were no large amounts of destruction. He wanted to hope for the best.

Marchenko returned to his work area and telephoned the station chief at home. He reported about what had happened, and laconically, without even saying "hello" or "excuse me," he said that he had learned about the accident from the dispatcher at the nuclear station's transport shop, Svetlana Morozova.

"I'll be there right away," Kiselevich said laconically.



He got ready quickly. The station was about three kilometers from his home. The city was still sleeping. Kiselevich walked along the road, staring until his eyes hurt, trying to make out the buildings at the nuclear power plant.

"Everything is normal. The railroad cars are at the work fronts. The people are on the spot," the station duty officer reported.

Today the night shift had done everything that they could. They had turned the station over to Mikhail Koval "like an egg."

"Best of luck, Makarych. You'll have quite a day ahead of you," Marchenko said, saying goodbye to his coworker.

And he had made no mistake. The problems began immediately. Tarasenko, who was on duty at the switch post, failed to come to work. At 1200 hours Kiselevich came running up from the Pripyat headquarters for eliminating the accident and gave the order to clear the station of rolling stock and to prepare to receive special freight and to evacuate the population.

Everyone was sick at heart, tortured, and afraid of the unknown. But still they believed that they would manage somehow, if they all worked together. And so they worked unceasingly. Mariya Dudko, operator at the technical office; Nadezhda Savenok, senior acceptance and turnover specialist; and Svetlana Redchits, ticket-officer cashier.

"Free the siding at the electric power station," V. Andrushchenko, deputy construction manager at the nuclear power plant, commanded.

That was easy to say: take the railroad cars away. But they were right under the nose of the fourth power unit, in the epicenter of the radiation.

"Let's go," Nikolay Avramenko said, giving the signal.

The switching locomotive kept running back and forth untiringly. The best train marshaller also was working on the run. In the afternoon, the lead arrived. Like slamming a bolt, the shoe cracks under the wheel, the doors are thrown open, and 50-kilogram ingots are passed from hand to hand onto the helicopter, and then into the inferno. The tension grows tighter and tighter.

Suddenly the passengers begin screaming, "Where the hell is the cashier?" At three o'clock Olga Vasilyevna Turayeva had disappeared. The station chief is thrown into confusion. He wants to get into the cash office himself. But then things turn out for the better: Zoya Vasilyevna Kratenok comes running up, although this is her day off. She rescues the situation, and keeps working until the end of the shift.

At night, there are fewer worries -- the freight flow for Yanov station had been broken at Ovruch, Korosten, and Chernigov. The only freight shipments arriving were those that were needed to eliminate the accident. People were working in a reduced complement. A few had "evacuated at their own request." But there was no denying that Valentina Aleksandrovna Karashchuk, the

relatively inexperienced station duty officer, had courage: she kept on working...

The trains ran without any hindrance. Day and night, the people at the Yanov station worked a labor watch at the center of the things. In the predawn hours of 27 April the urban population was evacuated. In the morning, Klavdiya Ivanovna Dekhtyar's shift came on.

"Do you think I should stay here? But how can you get along without switch operators?" Karashchuk asked.

"I can run out there myself," Dekhtyar said with a grateful smile. "You can leave."

Meanwhile the day was getting hotter by the minute. It was no simple matter to work in the zone, because there it was, the nuclear power plant. But those who remained understood that they had to, because someone had to load the freight.

During the daytime on 28 April Marchenko came on duty. The veteran had forgotten about his sores. For 12 hours on the tracks he had prepared the itineraries for receiving and dispatching the trains, and had worked the switches for the switching locomotive. When he did not have enough time to return to open the semaphore, traffic inspector Mikhail Volkovskiy came to his aid. Train marshaller Khvesko toiled away unceasingly.

Once again the night fell, and once again the day came. It was 29 April. At 1500 hours Valentina Karashchuk, who had taken over the duty from Klavdiya Dekhtyar, was given the order to close the station. People were evacuated to Vilcha, 43 kilometers away. L. Kiselevich had not left his post for even a single day. But now, after closing the station, he was, so to speak, leaving in the last lifeboat, with those who had remained true to their duty to the end...

"Hey, Pavel Grigoryevich, what fates brought you here?", the militiaman asked in surprise, meeting Marchenko at the station.

"I came to work on the night shift, but no one's here," Marchenko said, throwing up his hands.

"That's right. They've all left, and we're getting ready to leave too," his old friend said. "Do you want to come with us? Get those legs of your moving a bit faster."

"These damned things aren't carrying me too well," the duty officer said with a smile. "Because I've sat for 40 years at two stations. But you're right: it's time to go. I'll see you later!"

For a long time the old railroad worker looked at his beloved station with its extinguished signal lights. It was deserted and lifeless. It had been 22 years since he had seen the station like this. His heart was heavy. He walked around the terminal. Like a landlord, he turned handles on all the

doors to make sure they were closed. He got into his Zaporozhets, which had not yet cooled off after his trip there, and then drove home to Novoshepelichi.

After picking up his sick wife and closing up the house, Marchenko left for Vilcha. En route he almost drove in at the neighboring station of Tolstyy Les, where he had worked for 18 years, but his gasoline supply was getting low. Also, why should he lose time, because there would be few railroad workers there. Everyone had apparently left in an organized manner. But he was mistaken.

At the most necessary moment the chief of that station, V. Yevzhenko, had completely disappeared somewhere. His wife made her way to her daughter in Vilcha, and his subordinates on their own, with their families, had been evacuated and been put up at a new place. The commander had deserted his personnel and the property and assets at the station. It was not until 18 May that he showed up and asked for a leave.

Yes, those were some who did not behave worthily under the emergency conditions. Marchenko had children living in Kiev. He could have immediately gone there and stayed as their guest. But he never even thought of doing that. His hands did not shake or turn the car off the road to Vilcha.

Suddenly he was there. The familiar fruit orchard on the square in front of the terminal, the chestnut trees, the neat building of the third-class station. The same seven tracks, three of which were for the arriving and departing trains. However, it was Vilcha, and yet it wasn't Vilcha. Under the bright light of searchlights, the blue-gray twilight had retreated. Bulldozers, dump trucks, cranes, diesel locomotives, fork-lift trucks, truck tractors -- everything was roaring, groaning, and clanking. In a period of three days the volume of work here had more than tripled. And it was continuing to grow. The experienced railroad worker understood that this place today was one of the main centers in the offensive against the accident. Consequently, this was where his place was.

The people at Vilcha station had accepted into their families almost everyone from Yanov. And that had deeply touched him.

It was as though there had been no quiet life at the small line station. In the recreation and display area that had been turned into an office, everyone tried to bring pressure on the chief. And that was understandable: they all had good intentions -- to get the freight to the nuclear power plant as quickly as possible.

The chiefs at the middle-management level -- the station duty officers -- had an especially large workload. And Nikolay Tarasovich Prokopchuk, as well as all the rest of the people from Vilcha station, were happy to see their colleagues from Yanov arriving.

After resting for about three days, Kiselevich replaced Prokopchuk, who had been working himself to the point of exhaustion. Things began going more quickly. K. Dekhtyar returned on 6 May, seeing her son off into the army.

After being put in charge of a shift, she remained on duty until the end of the month, when she was sent away to rest. The collective at the station successfully carried out Operation Cement. The people at the nuclear plant received promptly everything that they needed to localize the accident.

During those hot days Pavel Grigoryevich carried on his shoulders the concern for people. With the chief of the railroad's personnel department, Fedor Fedorovich Avramenko, and chairman of the rayon railroad workers' trade union, Vasily Kirillovich Bortik, he went dashing around the rayons. He kept looking for evacuated railroad workers and their families. He helped to send their children, and the workers themselves, to get some rest. He worked as a deputy for the station chief. He engaged in finding the proper living conditions for people, and finding jobs for them. He too was offered a trip ticket to Yalta -- the only one. He refused to accept it, saying that it should be given to someone who had been working on the shift with him and who needed medical treatment.

Finally, all the people from Yanov station left for various destinations to get some rest, and the only person remaining in formation was Marchenko.

5075

CSO: 1800/460



## SEALING REACTOR

### TUNNELERS AT POWER PLANT SITE

PM270814 Moscow KRASNAYA ZVEZDA in Russian 25 May 86 First Edition p 1

[Own correspondent Lieutenant Colonel A. Polyakov report under the rubric "Chernobyl AES: Test of Courage": "Tunneling"]

[Text] There were various types of trucks outside the nuclear power station administrative building. Had it not been for the armored personnel carriers and the people in respirators alongside you might have thought it was an ordinary workday at the plant administration.

At the station's civil defense headquarters, where specialists are temporarily located, almost everyone was reading newspapers. Particular attention is devoted to reports on how our entire people are now helping to eliminate the consequences of the accident as quickly as possible, sharing their resources, and holding subbotniks. Powerful trailers with radio-guided mechanisms are traveling toward Chernobyl, and experienced specialists are arriving. All this is increasing tenfold the strength of those working at the nuclear station.

Lieutenant Colonel A. Belchenko, a political worker who arrived along with me, also brought the servicemen fresh newspapers. The timely provision of postal facilities is one of the avenues of party political work which is being actively pursued here. It is based on the personal example of communists, Komsomol members, commanders, and political workers. In the unit where Lt Col Belchenko serves many communists have already been rewarded and their fellow servicemen take them as their yardstick.

"Work on the station territory is being conducted at a high rate," Reserve Captain Yevgeniy Mikhaylovich Akimov, the senior duty officer at the headquarters for eliminating the consequences of the accident, said. "Of course, there are still sectors with increased radiation levels. We are taking no unnecessary risks but we do not feel any special psychological stress. We are working at our usual pace. Sectors with increased radiation levels are indicated on the map and constantly monitored." We traveled on the foundation trench from which the tunnel to the damaged reactor is being laid. Lt Col Belchenko, Lieutenant I. Tikhno, Senior Sergeant V. Kundas, a chemist, and Private I. Denkov, the driver, took their places in the APC. Lt Tikhno knows the route with his eyes closed, as they say. His subordinates are

tasked with constantly monitoring the radiation situation on the station territory. The servicemen cope successfully with the task.

Only once on the journey from the administrative building to the foundation trench did the instrument set up in the truck register a certain increased radiation level. Before reaching the foundation trench itself our way was blocked by a huge engineering machine [inzhenernaya mashina]. We stopped several meters away from it. Sr Sgt Kundas got out with the radiation meter and gave us the all clear signal.

The machine driver appeared for a moment from the turret of the engineering machine. The roar of the motors and respirators made it difficult for us to hear one another, so he wrote in my notebook: "Aleksandr Shakulo, reserve sergeant." That was all, there was no more time for conversation. And as soon as his perspiring face disappeared into the turret the machine's powerful metal arm gripped a thick pipe and lightly lifted it aside.

We went into the foundation trench. Over the tunnel leading toward the damaged reactor was a sign saying: "Let Us Complete the Tunnel Passage as Soon as Possible!"

[PM270816] Sr Sgt Kundas took his usual readings. The radiation level here was only slightly higher than the natural background level and in the tunnel was equal to the background level. We traveled through the tunnel along a narrow-gauge railroad, on which ahead of us tunnelers P. Dorofeyev and I. Myakotin were taking away a wagonload of concrete piping. The passage was being lined with these concrete semicircles.

The results of these tense days are yet to be summed up. And their heroes will be named. But now it is hard to even talk to them--they are hard at work. Tunnelers' team leader Vyacheslav Konovalov and tunneler Viktor Zhilkin took a minute's breather. Vyacheslav Konovalov is red-haired and broad-shouldered, he served in the Group of Soviet Forces in Germany as a company master sergeant and is an excellent sportsman. Viktor Zhilkin served in Germany too.

"It's ordinary work," they said about the tunneling.

"It's a shame there are only 24 hours in a day," Konovalov smiled. "We were working on building the 'Nikulinskaya' mine in the Moscow area. There were 60 men in my team there. Fifteen of them have come here with me. You can see how we are working...." Yes, the motherland can rely on such people. They do not stint on effort. They do not stop for a minute or take a second's break. Here they prefer results of work to loud words. And those results are clearly visible. There are dozens of meters to go to the reactor. Various communications lines [kommunikatsii] will be laid along this tunnel to the damaged reactor and then the work to "mothball" it will increase immeasurably.

Side by side and shoulder to shoulder officers, men, reserve servicemen, and people of different nationalities and professions are carrying out the motherland's responsible task. They are all united by a single desire--to rapidly complete the work to a high standard.

When we were leaving the station territory we were passed by firetrucks traveling in the other direction from the civil defense subunit, whose details soon embarked on decontaminating the area and the station buildings.

/9365

CSO: 1800/447

## SEALING REACTOR

### HELICOPTER MISSION OVER POWER PLANT

LD011127 Moscow TASS International Service in Russian 1047 GMT 31 May 86

[Text] Moscow, 31 May (TASS)--Special TASS correspondents Vladimir Itkin and Oleg Moskovskiy report from the area of Chernobyl AES: The operation carried out by the crew of the Mi-8 helicopter, identification number 07, on which TASS correspondents were given permission to fly, will merit just one line in the report of the government commission at Chernobyl AES.

We made each other's acquaintance on the ground at the helicopter steps. The commander was Captain Vasilii Levitskiy and the navigator was Lieutenant Aleksey Vylegzhanin. Their mission was to establish the radiation level over the fourth set. The helicopter was fitted with the necessary equipment. A vacuum dosimeter, a highly accurate instrument, is fixed to one end of a 40 meter cable. The other end is fastened to a bracket on the helicopter. Suspended precisely over the power unit, the instrument is supposed to "open" for a matter of seconds and take an air sample.

A high degree of flying skill and expertise is required for this sort of work. Vasilii Letitskiy has taken the machine up many times on his way to the AES.

It is just six minutes flying time from Chernobyl to the AES. One of us flew in the zone in the first few days after the accident, when the evacuation had just taken place. The striking thing then was the emptiness of Chernobyl and Pripyat.

Now the situation in the towns with a 30 km zone is quite different. It is a different Chernobyl. The headquarters of the government commission continues to operate from here. There are a large number of vehicles in the streets--cars, trucks, buses, fire engines, as well as tractors and bulldozers. In Pripyat there is another form of transport--armored personnel carriers. They are used to take people for changes of shift at the power station, and they serve as "taxis" for the specialists, of whom there is a large number at the AES at the present time. A hairdressers, a post office, an operator-controlled long-distance dialling office, and a bath-house have opened in Chernobyl.

From here, at an altitude of 400 meters, the cordon placed around the zone and the check-points on the roads are clearly visible. There are tent encampments.



Myths about the airmen are circulating here, but there are true stories. For instance: "How is it possible to measure the temperature conditions?" After all, you can't go down into the fiery crater with a thermometer. This operation needed to be performed with the relevant instrument. This task was carried out by Colonel Nikolay Volkozub, military sniper-pilot, a master of helicopter sport, and communist. He set out on his mission with a clear understanding of the degree of risk.

Col Volkozub needed six minutes to accurately lower a thermocouple fixed on a cable into the reactor from an altitude of over 300 meters. Subsequently, he carried out many other flights over the crater.

Now it was the turn of our crew. Six minutes' flight time. The commander and navigator exchange remarks:

"We are approaching the reactor..."

"We're going down. Altitude 200 meters..."

"We'll hover for 15-20 seconds."

This was enough time to enable the instrument to function. Absolutely clean readings are required. The cable must not be reeled into the cockpit of the helicopter. The instrument must not be handled. It must be brought to the ground clean.

Trailing its cable, our helicopter leaves the zone. And then, with extreme precision, it gently lowers the instrument onto a special stand on the ground. In a few minutes a laboratory analysis will be performed.

We can report that today the radiation level at the damaged power unit has again gone down.

/12913

CSO: 1800/450

## SEALING REACTOR

### MOSCOW TV DESCRIBES WORK AT POWER PLANT

LD312203 Moscow Television Service in Russian 1430 GMT 31 May 86

[From the "Vremya" newscast]

[Excerpt] Representatives of labor collectives have come to the area of the Chernobyl AES from all corners of the country in order to give assistance and help eliminate the consequences of the accident. The best representatives of the miners of the Donbass, the Moscow area, the Kuzbass, the Baltic republics and the Pechora basin are working as members of a combined mine-builders' detachment at the Chernobyl AES. A brief moment's rest. Here are some interviews made by our Kiev correspondents during the break between shifts: [Video shows group of men standing in the open air, mostly wearing white overalls and white caps, talking to correspondent; respondents identified from captions]

[Question] Did you come here of your own volition?

[Engineer S.F. Minder] Purely of my own volition. And there remain very many who want to come. When there's a new shift, then they'll come. Many failed to get onto this shift.

[Question] Did your team come here all together, are you all from one single mine and directorate?

[S.F. Miner] No, ours is a combined detachment from the Mosbasskhakhtostroy, Tula-ugol and, Novomoskovsk-ugol, and we are helped by men from the Donetsk-Shakhtostroy combine.

Another shift is setting out for the area of the station. The miners have been set the task of constructing within a tight schedule a tunnel 21 meters in diameter and 160 meters long beneath the No. 4 generating set. From here the removal of earth will be carried out by a conveyor belt for the construction of a concrete protection beneath the damaged reactor. Because of the raised radiation level the shift lasts no longer than 3 hours. Eight teams of miners ensure that excavation of the tunnel continues round the clock. A socialist competition has been organized. Each day every team

overfulfills its task. Everything has been put into second place behind the single aim of eliminating the accident as quickly as possible. [Video shows bus carrying men wearing overalls, white caps and white face-masks. The bus is seen driving up to the building of the Chernobyl AES, the damaged roof of which is shown in close-up.]

/12913

CSO: 1800/450

## SEALING REACTOR

### RADIOACTIVE WATER DRENCHES FIREMEN

LD041230 Moscow TASS in English 1131 GMT 4 Jul 86

[Text] Moscow July 4 TASS--Even now that the consequences of the accident at the Chernobyl nuclear power plant have been eliminated on the whole, it again takes firemen courage and staunchness to do their job, says a story in the newspaper KOMSOMOLSKAYA PRAVDA.

Now firemen are busy pumping out and disposing of water which accumulated at the base of the destroyed reactor. At first sight, water seems to be as pure as in a forest spring, but it is dangerous, it is contaminated. A dump-truck once accidentally drove onto the curb of the pavement, then rode across the place where hoses are coupled, and water broke through. The pumping station was feeding water at the rate of 110 litres per second. A fountain of contaminated water gushed out of the hoses wildly. It was only at the fourth go that the firemen succeeded in replacing the damaged hose. Yet the most terrible thing happened--they got wet through. Yet nobody left the place until the leakage of water was eliminated, albeit they knew well to what danger they were exposing themselves.

Everything ended well. Cautious medical men did not discover any deviation from the norm in the health of the firemen after the "showerbath," but taking into account the "purely psychological" aspect of the incident, the young fellows were proposed that they leave Chernobyl and go home. Yet the latter refused point blank to do so, took a rest, and are again at work.

/8309

CSO: 1800/543



## EVACUATION

### BELORUSSIYA EVACUATES 30-KM ZONE

#### Nearby Rayons Absorb Population

Minsk SOVETSKAYA BELORUSSIYA in Russian 8 May 86 p 3

[Article by BELTA [Belorussian News Agency] special correspondents L. Peresypkina and I. Kuksa, under rubric "Up-to-the-Minute Reporting": "'We're All in This Together'"]

[Text] We heard those words ["We're all in this together"] spoken by many of the people with whom we talked in Khoynikskiy and Braginskiy rayons, which are situated near the Chernobyl AES [nuclear power station]. In the rayon centers, villages, and settlements, people are continuing to work at their work stations and are living their ordinary lives.

As always, after the morning detail, Lenin Komsomol Prize Winner, and delegate to the 12th World Festival of Youth and Students in Moscow, mechanizer on the Strelichevo Sovkhoz, Khoynikskiy Rayon, Vladimir Kashperko drove his T-150 out onto the field. Vladimir stopped his vehicle for a few minutes and said that the field operations on the sovkhozes were already coming to an end, and that today he would be overfulfilling the norm -- instead of sowing the planned 16 hectares, he would be sowing 20. And tomorrow he would begin tuning up his "chief" vehicle -- a fodder-harvesting combine. Because Vladimir has set all the labor records on the fodder field.

"The accident at the Chernobyl AES was a tragic event," V. Kashperko said, "but I and the people around here know that, at the station and the surrounding area, work is continuing to eliminate the consequences of the accident and to render assistance to those who have suffered. We see our duty in working honestly and calmly. We cannot fail to be indignant that various Western 'voices' have been shouting about some kind of panic among the population, instead of doing what is the normal thing for people to do -- express sympathy for those who have found themselves in an unfortunate situation. Yes, some of the population of our rayon have been temporarily evacuated from the 30-kilometer zone around the AES. But those who had to move are not sitting around idle. Rather, they are engaged in their customary work as peasants."

Four farms in Khoynikskiy Rayon which are situated in its southern part have had their base transferred to the safe zone. All the services have been operating without any problem. Special groups, headed by rayon administrators, have been created.

We met secretary of the Komsomol organization of the Strelichevo Sovkhoz, Aleksandr Golub, near the Maydan Fodder Enterprise, where the livestock from the Novaya Zhizn Kolkhoz were put in the sheepfolds. Aleksandr helped to water the animals. Yuliya Kirillovna Bondarenko, who used to be a milkmaid, but who now is retired, immediately began bustling around. After learning about the accident, the 60-year-old woman went to the officer herself and offered to help.

"We are not getting discouraged. Everything will be all right," Yuliya Kirillovna said. "Because the government and the specialists are taking all the steps to eliminate the consequences of the accident."

Veterinarian's assistant on the Novaya Zhizn Kolkhoz, Communist Party member Zinaida Polikarpovna Lukyanenko and animal-farm manager Svetlana Ivanovna Gromyko have already begun to carry out their direct duties at the new place. True, at the end of the day deputy to the village Soviet Z. P. Lukyanenko had to leave for a short time. In the village of Dvorishche there was a united session of three rural Soviets, which discussed the vital problems of the day.

Over the period of 36 hours the population doubled in many villages in Braginskiy Rayon which lie outside the 30-kilometer zone of the Chernobyl AES. After the work day there was an unusual amount of activity on the streets of the villages of Ugly and Teklinov. The people returning from work included both the local residents and those whom they welcomed into their homes. On the Kolkhoz imeni Engels, there is enough work for everyone. People are working on the animal farms, in the field, and in the shops. In the homes, at suppertime, tables would be set for families that had increased to 10-12 persons. The raypotrebsoyuz [rayon union of consumer cooperatives] made sure that the stores were provided with the necessary amount of bread, canned meat and canned milk, butter, vegetables, and juices. The farm provided potatoes. All the evacuees receive bed linens, and, whenever necessary, clothing and shoes.

In the emergency situation that has developed in this region, one saw the manifestation of the best character traits of Soviet citizens: collectivism, comradeship, kindness to others, and responsiveness. One large misfortune had united people into a single family where everything in the home is shared equally by all.

In the apartment of the chairman of Kolkhoz imeni Engels, Nikolay Sergeyevich Shapitko, several families from the Posudovo Sovkhoz are living. Mariya Ivanovna Smolenets and her thirteen children were made comfortable by retiree Aksinya Fedorovna Khodosok. In these and other homes where the workers from the Posudovo Sovkhoz have moved, we saw calm and kindness in the relations among the people.

In the village of Ugly, the operation of the medical station that was evacuated from Zalesya has been extended. Medical aide Mariya Kirillovna Yefimenko issues the necessary medicines to the residents, and consults with them on questions involving measures of sanitation and hygiene. The brigade of medical doctors has begun a careful examination of the people who lived for a certain time in the area of the 30-kilometer zone of the AES. The school cafeteria in the village of Ugly urgently switched over to two-shift operations. Brigades of carpenters are building portable showers. And in the villages themselves, the personal bath rooms are constantly lighted up. Everything is being done to assure that people can observe the requirements of hygiene and sanitation.

As in the neighboring Khoynikskiy Rayon, the party, Soviet, and economic workers make trips constantly to the inhabited places, honestly and directly explaining to people the situation that has developed. The people who spend the whole day "on wheels," untiringly explaining to people the situation in the Chernobyl area and in the adjacent territory of Belorussia, and discussing the tasks under the new conditions, include Secretary of the Braginskiy Rayon Committee of the KPB [Communist Party of belorussia], V. M. Kravchenko. We accompanied her to several villages and we saw that Valentina Mikhaylovna does not leave a single question unanswered.

Valentina Mikhaylovna explains that everyone will work in his specialty at the new location, because there is plenty of work for everyone -- the mechanizers, animal-husbandrymen, carpenters, and electricians. It is necessary to provide all the amenities for people, to take care of the farm animals, and to continue the field operations. In the villages that are in the danger zone and that were left by their inhabitants, militia workers are on duty round the clock. A pass system is being worked out, which will make it possible, whenever necessary, for people to go back and get things that they need. By governmental decision, monetary assistance has been provided to every evacuated family.

Even at these chance meetings in the street, we did not see any panic in people's faces. Among those who walked up to have a talk with the rayon committee secretary there were a rather large number of participants in the Great Patriotic War, and former partisans. They understand, probably better than anyone else, that in a complicated situation it is necessary to display restraint and calm. And the young people try to keep up with the veterans.

At the Braginskiy Rayon Committee of the Communist Party of Belorussia, members of the rayon staff are on duty round the clock. The work day of the secretary of the party's rayon committee, G. N. Pankov, is as full as it can be. But he is ready to work still more, just as long as the misfortune abates. Georgiy Nikolayevich comments tersely on the recent events.

"The level of radiation in the station area is dropping, but the situation continues to be complicated. In order not to risk people's health, we evacuated from the danger zone more than 7600 persons. A large number of farm animals were shipped out. Without a doubt, this repopulation within a short period of time created considerable complications. The oblast and the republic helped to provide people with food supplies, medicines, and means of



hygiene. Bath houses in the rayon are operating round the clock. All the construction workers are employed in building temporary mess halls, medical aid stations, and mobile showers. All the evacuees are receiving news about their loved ones, and are receiving newspapers and magazines, since the post offices at the new locations began operating the day after the repopulation. Pension payments have been delivered to retirees on time. Special medical brigades are examining the people who are living either in the danger zone or outside of it. Whenever necessary, the residents are hospitalized. Every two hours, measurements are taken of the radiation level, and the results are reported to the public. All the wells have been completely sealed."

The meetings that have been held at the party organizations have shown that, under the conditions that have been created, Communists and non-party members are ready to work to their utmost. And that is how it should be for Soviet citizens.

#### Five Farms, 7000 People Moved

Minsk SOVETSKAYA BELORUSSIYA in Russian 9 May 86 p 4

[Article by SOVETSKAYA BELORUSSIYA correspondent A. Gotovchits, Gomel Oblast, under rubric "Reporter Dictates a Report to This Issue": "Shoulder to Shoulder"]

[Text] You drive around the territory of Braginskiy, Khoynikskiy, and Narovlyanskiy rayons, which are located not far from the Chernobyl AES, and you notice that life is going on as usual. People are continuing to work in the field and on the animal farms. The mechanizers are carrying out the chemical weeding of the winter and spring crops, and the animal husbandrymen are concerned about the high milk yields.

Recently I happened to visit Parizhskaya Kommuna Kolkhoz, Braginskiy Rayon. Chairman of the kolkhoz board, P. M. Kudan, told me, "More than 700 people came here from the Chyrvonaya Ukraina Kolkhoz. Almost a thousand head of livestock have also been transferred. All the people have been given a place to live, and work has been found for everyone."

Many of the villagers themselves have offered the evacuees their own homes. Six new arrivals moved in with Ye. I. Lozovik, and four moved in with V. N. Korsak. And that is how it is in every home.

"The people here are good people," G. I. Shulga, an evacuee from the village of Gden, says. "They share with us everything that they have."

I drop into the home of electric welder V. I. Panasevich. He and his wife are bringing up eight children. One would think that they don't have any room for the new arrivals. But no, Vladimir Ivanovich has taken into his home two retirees, Yelena Pavlovna and Vasilii Ilich Shpetnyy [or Shpetnykh]. Yelena Pavlovna was cooking supper. Vasilii Ilich had gone out to the animal farm, where his little brown [cow] was standing in a sheepfold. Ordinary concerns...



I asked how the trade in the local store had been organized, because the size of the population in the village had increased considerably. Despite the night hour, the store had plenty of bread, butter, frozen fish, fresh cucumbers, and other food products. Larger supplies than usual of juices and other beverages had been brought in. But what about hot food?

"We don't have our own mess hall," kolkhoz chairman P. M. Kudan says. "We have been allocated a special Finnish hut [Quonset hut]. In the next two or three days we shall assemble it, and public eating establishments will open up a mess hall in it."

Other questions linked with providing the amenities for people are also being resolved here. There has been no break in production activity.

Peasants who have arrived from the Chyrvonaya Ukraina Kolkhoz have been working actively. Milkmaids M. S. Vodnitskaya, V. N. Maksimenko, and T. I. Bondar have been milking the cows in the summer camps. M. I. Parkhomenko, M. M. Atroshchenko, and other animal husbandrymen examine the young animals and grade them by age groups. Mechanizers Ye. I. Puzyrina, P. I. Shulga, and V. S. Puzyrina drive T-150 vehicles, bringing up the crude fodders and concentrates that have been allocated for the livestock.

People arriving from the villages of Kryuki and Kulazhino were welcomed at the Maleykovskiy Village Soviet. The small village of Petritskoye took under its roof more than 150 persons from Kulazhino.

"I understand completely -- we're all in this together," former partisan, retiree G. D. Zapoykova told me when I met her. She has taken three evacuees into her home.

The hostess and the evacuees were seated at the same table. They had just finished planting potatoes and now they were eating lunch.

Other evacuees help their hosts and hostesses to cultivate the personal plots.

"People have been very kind to us," war veteran N. Ye. Ivanenko says. "So we try to help them in any way that we can. And how could I not help if, for example, I had just stepped across the threshold and the man of the house, Anatoliy Krus, took me out for a stroll to show me his personal plot: 'Here's the potatoes. Over there are the groats. And there's the milk...'"

That very evening that was a combined session of the Maleykovskiy and the evacuated Krukovskiy village soviets. The session was held in the club house in the village of Selets. The deputies were resolving the urgent tasks: how to arrange for the care of the cows, sheep, young cattle, and other livestock belonging to the kolkhozes and to individuals, how to organize efficient medical and trade support... They determined that the board of governors of the transferred Kolkhoz imeni Lenin should be temporarily located in Petritskoye.

Chairman of the Braginskiy Rayon Executive Committee A. M. Prokopov says, "More than 7000 people were evacuated from the zone adjacent to the nuclear power station. Five farms were completely evacuated. The principle of placement is the following: Kolkhoz imeni Lenin is temporarily located on Kolkhoz imeni Thalmann. The Leninski Shlyakh Kolkhoz is on the Chyrvony Kastrыchnik Kolkhoz, etc. On five more farms, partial relocations of the population within their own territories have been carried out. We are providing the residents who have arrived here everything that they need. For these purposes the oblast executive committee has allocated the rayon additional funds for food products, medicines, building materials, and equipment. A large amount of assistance has been rendered to us by motorists in Oktyabrskiy, Dobrushskiy, and Rechitskiy rayons. Medical inspection of the population has been organized."

Energetic measures to evacuate people from the 30-kilometer zone have been taken in Narovlyanskiy and Khoynikskiy rayons. The environment is being carefully monitored.

But what about the villages that have been temporarily abandoned? Have they been left completely unattended?

"Of course not," chief of the internal affairs department, Khoynikskiy Rayon Executive Committee, Lieutenant Colonel of Militia L. M. Zhevnyak says. "As in the neighboring rayons, we have organized round-the-clock patrols by militia detachments in the populated places that have been evacuated."

When misfortune occurs, people rally closer together. This is in accordance with the law of humanity and with our Soviet morality. It is easier to withstand any misfortune together.

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CSO: 1800/406

## EVACUATION

### AREA CHILDREN EVACUATED TO SUMMER CAMPS

#### 2,000 Belorussian Children in Estonia

Tallinn SOVETSKAYA ESTONIYA in Russian 6 Jun 86 p 3

[Article from Estonian News Agency: "The Heat of a Pioneer Summer"]

[Text] The people of Tallinn yesterday met the Belorussian schoolchildren, who have come to Estonia for the summer holidays, like good neighbors. Even the sun came out after long overcast days so as to gladden the music, laughter and agitated conversations bursting into the daytime quiet of Baltic Station.

The train arrived in Tallinn on special run No 446 with the first group of children from the city of Kalinkovichi in Gomel Oblast, bordering on the Chernobyl region of the Ukraine. The accident that occurred at the nuclear power plant disrupted the customary routine of the organization of summer relaxation on the banks of the Pripyat. According to a resolution of the VTsSPS [All-Union Central Trade-Union Council], the Pioneer camps of Belorussia are given over to pre-schoolers and young students this year. Students in grades 4-7 along with their educators and Pioneer leaders were sent to vacation in other fraternal republics.

The health of two thousand children from Belorussia will be nurtured at 29 permanent country Pioneer camps in Estonia. They will spend all three shifts here. The trade-union committees of enterprises and organizations of our republic have carried out much work on preparing the accommodations of the Pioneer camps. Additional places have been created in them, the urban sports camps have been expanded, and various functions have been planned for the students by place of residence.

According to tradition, children from the GDR, Hungary and Sweden will vacation at the Pioneer camps of our republic along with Soviet children. Holidays of national friendship, amateur performances and national-cuisine days will become an integral part of the cultural program of the Pioneer summer.

"We are bringing many Belorussian songs, dances and national games," related physics teacher S. Pysin of Kalinkovichi secondary school No 1 and third-detachment leader to the ETA correspondent. "We would like our Estonian friends to understand our children, art and customs better. This is the first

time we have been to Estonia, and therefore we are awaiting the city and town tours and trips to the picturesque parts of the republic with great interest."

Representatives of the labor collectives of the republic approach the Pioneer detachments forming up on the platform. Badges flash with the names "Baltic Manufacture," "Estrybprom" [Estonian Fishing Industry], "Tallinavtotrans" [Tallinn Truck Transport]... A brass band plays a march. The chief of the Belorussian detachment, war veteran S. Demichev, gives the command, and the columns of schoolchildren are sent to the buses. Have a happy vacation, children!

The special train was received at a ceremony by N. Yuganson, member of the Buro of the Estonian Communist Party Central Committee and chairman of the ESSR Trade-Union Council, and A. Almann, candidate member of the Buro of the Estonian Communist Party Central Committee and first secretary of the Estonian Komsomol Central Committee.

#### Gomel, Kiev Children in Caucasus

Moscow VOZDUSHNYY TRANSPORT in Russian 26 Jun 86 p 1

[Article by VOZDUSHNYY TRANSPORT correspondent G. Kostenko, Anapa: "A Busy Shipping Season: Posing Tasks, Taking the Features of the Port into Account"]

[Text] The comfortable Icaruses with prettily formed banners approached the air terminal of the all-union children's sanatorium at Anapa one after the other. Since June 1st, all Pioneer camps, as well as sanatoria for adults and bases, have been given over to children. Five thousand boys and girls from Gomel Oblast arrived here by railroad and civil aircraft. From Kiev Oblast came 350 children. I got acquainted with Lena Kovtun.

"This is my first time in Anapa. They say it is nice here. I hope to meet people in my grade from other schools in the country and spend time in an interesting way here."

The plane from Leningrad landed. There are also children in it. Coming down the gangway, they squint and avidly breathe in the curative ocean air. After 15-20 minutes, comfortably settled in the buses, these children left for their camp, to the ocean, for health.

I went around to the services with airport chief G. Unichenko. On Sunday, practically all production commanders are at their posts. And this is fully understandable: it is today that the airport will receive 35 planes for the first time this year. This is 3.5 times more than in recent days.

Air terminal shift chief O. Sarukhanov related: "The work is being conducted precisely and harmoniously. It is true that we didn't get by without some difficulties: there is no announcer. His duties are executed by the operational dispatcher or the shipping-service organization chief, L. Makarova."



"The problem, unfortunately, is not an easy one," explained G. Unisenko. "The Krasnodar Airport, for which we are a feeder airport, and the North Caucasus Administration for the summer mass-shipment period beginning on June 1st are planning an increase in the limit of the number of personnel by 8, and later by another 7, people. Why couldn't this be done 10-15 days sooner? We could have trained and prepared the newcomers before June 1st. And thus, in the first days of the month we are literally everywhere at once. Moreover, every year it is harder and harder to find the people we need. This should be taken into account by those who are in charge of number limits! In the end result, the passenger-service climate suffers appreciably. A new worker just almost sent a passenger's baggage to Yerevan instead of Baku. The personnel specialist cannot safeguard it--complaints cannot be avoided."

It is not enough that the limit, beginning on the day of shipping-volume increase, was quadrupled. It was still not supported by the wage fund.

It seems that the Krasnodar Airport and the administration do not take into account the features of their type of unique industry subunit. Anapa is considered an airport with local air routes, but it transports 360,000 passengers a year, operates under ICAO class I and can accept all types of aircraft. At a minimum, 5-6 people from the allotted numerical limits have "settled" at Krasnodar Airport. M. Saygin, the chief of the labor and wages department of the airport, always has one answer for this: "They are getting along without them. We need them more..."

The Anapa is being shortchanged in supplies of building materials and sanitation equipment, which was noted more than once by all kinds of commissions, including an integrated commission of the administration that was verifying its readiness for mass shipments.

Specialists told me that Anapa is a backup for many airports in the North Caucasus. But its capabilities are not utilized fully due to the mode of operation: at night it is closed. The transfer of the airport to around-the-clock operation, at least during the "peak" of mass shipments, would be of great advantage. This would not only cover the expenses for maintaining the personnel, but would generate a saving through the full utilization of the aircraft fleet.

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## EVACUATION

### PARTY RAYKOM, GORKOM STRUGGLE WITH CONSEQUENCES OF ACCIDENT

#### Borodyanskiy Rayon

Kiev PRAVDA UKRAINY in Russian 13 May 86 p 2

[Article by PRAVDA UKRAINY special correspondents V. Lukyanenko and S. Ryabov, Borodyanskiy Rayon, Kiev Oblast: "The Raykom in These Days: Party Members Set the Example of Efficiency and Teamwork in Overcoming the Aftermath of the Chernobyl AES [Nuclear Electric Power Station] Accident"]

[Text] The Chernobylskiy Raykom of the Ukrainian Communist Party considered itself mobilized from the first day of the accident at the AES assumed the principal burden of concerns for evacuating the populace from the 30-km zone, the raykom left Chernobyl last.

On the very next day it set up at full strength in the building of the Borodyanskiy Raydom of the party (the Borodyanskiy Rayon personnel divided not only the building, but also the responsibilities in half with their comrades) and continued its work. By the way, the raykom building in Chernobyl is not empty even now: the government commission is working here.

Yes, as always in exceptionally difficult situations, party members were at the forward edge and took up the most difficult tasks. They had to be everywhere: not only helping to mop up the accident, but also adjusting the routine and normal life of the evacuated populace.

Although the raykom personnel of Borodyanka greeted their colleagues hospitably (they even managed to print little name plaques on the doors for the Chernobyl personnel), of course the rhythm and procedure of work was still uncustomary for the arrivals. Without having unpacked boxes and paper sacks of party documents, they immediately set off for local areas to strengthen ties with primary party organizations.

V. M. Mernenko, second secretary of the party's Chernobylskiy Raykom, says, wiping eyes reddened from lack of sleep with his fingers from time to time: "Evacuation in the rayon took place later than in the power workers' settlement, and the staff set up in the rayispolkom (headed by Deputy Chairman V. G. Stepanov) managed to prepare the people psychologically. This was very important. One must consider the specific nature of the village: it is

difficult to part with goods and chattels, especially the poultry and the garden planted in spring. More than one granny begged with tears in here eyes: 'leave me here. My whole life is on this soil...' We had to convince them that precautionary measures were necessary. Where was I personally? In the Pripyatskiy Sovkhoz and the Zapovit Ilich and Shlyakh do komunizmu kolkhozes... It was well that there were personnel of the raykom staff in practically every village: if a misunderstanding arose they calmed the people with a direct, honest word."

The evacuation took place in an organized manner in two stages. First the residents of villages located nearest the Chernobyl AES were taken out, then the others left. It wasn't easy to load the cattle, about 19,000 head, but they coped--1,500 vehicles arrived from all over the republic.

People were accommodated locally according to the sectorial principle: kolkhoz to kolkhoz, enterprise to enterprise. This made the organization easier and permitted controlling the situation fully. Now practically everyone has been settled and given a job. Party organizations and party groups began to function at the new locations without vacillation. Party meetings with a common agenda of "Work Under Existing Conditions" were held as the first matter. All managers and party organization secretaries and the majority of party members are in their places.

But we are also looking ahead. The structure of the party organizations obviously would have to be revised. Each person's behavior now is being evaluated especially strictly. Life in the party organizations generally is going according to the Bylaws; the difficult situation rallied the party members even more and increased their spirit.

At the end of the conversation Viktor Mikhaylovich joked:

"By the way, we got rid of the 'paper storm' at one fell swoop. In ten days not one document came out of the raykom, but everyone is working with the highest degree of efficiency. The people, both the Chernobyl and Borodyanka people, are not letting us down."

We set off for the villages where the Pripyatskiy Sovkhoz was located. It was nearest of all to the AES and was evacuated before the others. Along the way and in the villages we saw that the new arrivals had joined actively in strengthening the material base of animal husbandry. No one waits for instructions. Fodder preparation brigades are being formed. Oblast farms now are sharing fodder, but the party members decided (everyone supported them) that they could not sit around and let others do it for them. They met representatives of both raykoms, Borodyanskiy and Chernobylskiy, which are monitoring the food supply, living conditions and medical services. The situation has stabilized so much that Chernobyl people have gone for their forage harvesters and combines. All this naturally is undergoing radiological decontamination.

We arrived in the village of Maydanovka just when party members of Pripyatskiy Sovkhoz were holding a party meeting. They expressed themselves briefly and unanimously: enormous thanks to the Maydanovka residents for the sympathy and

attention, which best heals spiritual trauma after leaving home places. They were well settled and now they had to roll up their sleeves. It's impossible to live as dependents with the cordial hosts. The talk was of the very same thing in the Druzhba Kolkhoz and Kolkhoz imeni Kalinin of Chernobylskiy Rayon, and in all the others.

Party Committee Secretary K. V. Makovskiy of the Komintern Kolkhoz tells us: "We received 1,100 persons. The first bus arrived at two in the morning and everyone was settled by eight a.m. The party members immediately registered with me. Now there are 35 of them. We are looking for work for the arrivals in their specialty. We are ordering food, dishware, clothing, everything necessary. The state is helping and we are sharing.

"A family of five also settled with me. Its head is a foremost machine operator and I see that he means to keep up his own style as a guest."

"Of course we encountered no small administrative problems," says V. I. Overchuk, director of the Maydanovskiy Sovkhoz. "The 1,140 head of cattle, 500 from personal farms, aren't familiar with machine milking. Our milkmaids on pension helped out. Further, 960 persons arrived, of who 62 percent are pensioners. We have to find the most effective job placement structure, which requires time and effort. We are being helped here by both party raykoms. We have the closest contact with P. R. Kovalenko, party committee secretary of the Pripyatskiy Sovkhoz."

"But most important," said the director, "is that our people are such that I have to bow low to them. Tens of villagers came and asked that the resettled people be sent to them. I think that the traits instilled in people by our way of life have been manifested especially vividly now."

"This is true. The misfortune left no one indifferent," said Party Committee Secretary M. Ye. Deriy, joining the conversation. "Just take Lukashevna."

"Who is that?"

"Pensioner Sodal Lyubov Lukashevna. She has seven persons living with her." As we were leaving the sovkhov we came up to an ambulance with Lvov plates. A team under the direction of physician S. I. Akimov had in fact arrived from Lvov. It was going from door to door and periodically taking blood analyses from all those evacuated (who already had undergone medical control twice). Engineer/dosimeter operator A. Ye. Shlapinskiy measured the radioactive background and soil contamination before our eyes. The instrument indicated that since noon, when we had arrived, the level of radioactivity (which even before this had been slight) had dropped appreciably. There was not and is not any danger to people's health.

Signs of adjustment of a quiet life are noticeable everywhere. Workers widely celebrated the victory holiday. Secretaries of both party raykoms took part in a holiday rally. Veterans from both rayons were congratulated. Choral groups of Chernobylskiy Rayon performed and athletic contests were held.



The first issue of the Chernobylskiy Rayon newspaper PRAPOR PEREMOGI, printed in the Borodyanka printing house, came out on 9 May. For now it is on two pages, but with the previous number of copies. The party raykom address published here contains the following lines: "The accident at the Chernobyl AES forced the resettlement of thousands of people from the danger zone. The residents of Borodyanskiy, Makarovskiy and certain other rayons cordially received the Chernobyl residents. . . . Our task is to fulfill the production program in industry and construction, in agriculture, and in cultural and everyday services efficiently and shoulder to shoulder with local workers." Telephones in the Chernobylskiy party raykom are ringing more and more often--as before, party members are consulting with the raykom.

We took the electric railroad back to Kiev. In the car there were also conversations about what happened. People talk about various things, but most about the efficiency and calm work being done in the resettlement rayon. Everywhere one senses respect for the unselfishness and selflessness of our citizens.

Tens of thousands of requests to be assigned to help work on eliminating the consequences of the accident have been received and continue to come in to party and soviet organs from the republic's workers.

#### Polesskiy Rayon

Kiev PRAVDA UKRAINY in Russian 14 May 86 p 2

[Article by PRAVDA UKRAINY correspondent A. Sokol, Polesskiy Rayon, Kiev Oblast: "By Mandate of Duty: Common Concerns of the Party's Pripyat Gorkom and Polesskiy Raykom"]

[Text] I met Yu. M. Sokolov in the vicinity of the AES [Atomic Electric Power Station] in the days when the Chernobyl disaster was not yet pictured clearly and alarm was roaming about. You would not immediately recognize the secretary of the party's Kiev Obkom in the protective clothing such as builders wear and with shirt collar unbuttoned. Yurly Mikhaylovich was anxious but had an accentuatedly unhurried, cool nature. In chatting with him people brightened up and calmed down.

The style of behavior of party personnel in these days developed in this way: make decisions without delay while calmly estimating the situation and direct people's energy into the necessary channel while supporting them.

Initially a large portion of those evacuated arrived in Polesskiy Rayon. The rayon has 35,000 residents, and 23,000 arrived from Pripyat. How could they be accommodated and provided with everything necessary? On the very first night the Polesskiy Raykom took a test for efficiency.

A raykom emissary got on each bus arriving at the rayon line and took the vehicle to the necessary village. Guides were not required in the rayon center although they were ready. They were replaced by settlement residents. Despite the fact that it was midnight and it was far off, they came to the raykom, the point of arrival of the transports. They would keep asking

anxiously: "Where are the victims?" Such was the response to a radio address to the population and to door-to-door, apartment-by-apartment rounds of dwellings by raykom activists and deputies.

The raykom buro held sessions a day later. How are the evacuees being fed? The dining halls and coffeehouses (where present) were not intended for hundreds on thousands of visitors. Then came a call from the settlement of Volchkovo. In reporting the situation the selispolkom chairman remarked: "I looked in on a hut and there was supper ready."

The people themselves suggested the solution: to eat together. For this all necessary products had to be on the market and kolkhozes had to help.

The urgency of evacuation separated some families temporarily. A guiding hand was necessary. The raykom's line is to know about everything and act and help promptly.

The important thing is to not allow panic and to explain the true state of affairs. For example, when a rumor went around Denisovichi that the neighbors were being evacuated but not us, V. M. Repeta, chairman of the raykom party commission, and P. N. Teslenko, chief physician of the sanitation-epidemiological station, immediately headed there. They measured the radiation background in the presence of the villagers: two times lower than in the rayon center. Everyone calmed down.

The raykom begins meetings and conferences with the preface: "Report deficiencies." And there are deficiencies. The traffic posts, for example, went too far: don't go there, don't take this. They were corrected. Some of those attached smelled of alcohol. They were warned: "No drinking--the village gatherings forbade it."

There was a special demand placed on party members responsible for the people's health. Here is one of the dialogues:

"To what extent has the populace been examined by the laboratory?"

"The evacuated persons 100 percent, local persons--the majority."

"Why are you slow with the locals?"

"Not everyone responded to the invitations."

"Organize door-to-door rounds and radio explanations by specialists. Complete the examination in three days."

Everyone did as demanded.

Medical personnel had no more difficult work than now. Not everyone coped with it. One person's nerves didn't stand it and two fled. But there are more than a hundred at the post from Kiev, Donetsk Oblast, Zaporozhye, Zhitomir Oblast, Transcarpathis. There is a fifth-year student next to the physician. Each village has a mobile medical point.

The raykom invariable asked from the first day of the disaster: "What's happening with the children?" Today all Poleskiy kids are being sent to southern Young Pioneer camps following Pripyat pupils. They are traveling by special train.

The Poleskiy Raykom is resolving many problems with the Pripyat Gorkom. They are in the same building. Common roof, common concerns. Together they trouble themselves over needs of the power engineers continuing the watch at the AES.

They are in the evacuation zone on the territory of Chernobylskiy Rayon. They made a request: Work is work, but films also are needed. An additional mail sorter also is needed--there is much mail.

In the evening Kiev Obkom First Secretary G. I. Revenko phoned Gorkom First Secretary A. S. Gamanyuk. A thorough, businesslike conversation was preceded by the following introductory remarks:

"Where are you living, Aleksandr Sergeyevich?"

"In the hotel."

"Do you have everything?"

"Yes."

"What don't you have?"

"Time..."

Gamanyuk learned of the accident at the AES while in the hospital. He interrupted his treatment and arrived at the evacuated gorkom.

Work, work. The telephone rang not long ago at midnight: "A column of vehicles and people must be in Pripyat by six in the morning." And they were. Ahead of schedule. The work frontage is ever wider, ever more voluminous. Party members of the Pripyat Gorispolkom staff held a meeting which previously had not been held and apparently will not be again. It took place at dawn, on Victory Day, with the agenda: "About the workload and responsibility of CPSU members."

Installations of the AES at which work is going on now are being called by a single word--"promploshchadka" [industrial area]. The work there is special: when you have worked your time you rest. There must be a replacement. Back-up collectives are required...

The Poleskiy and Pripyat party members now are working shoulder to shoulder. The party organization of the 40-richchya Zhovtnya Kolkhoz and the temporary party group from Pripyat outlined a joint plan of action without delay. Without reflection, the city dwellers took up the work: A. M. Gorbunov on the saw frame, V. M. Novokhatskiy in the repair shop. Builders G. I. Svirkun,

V. A. Mostovoy, V. V. Kostyuk, V. N. Demchenko and L. A. Repka joined the construction brigade of the Kolkhoz imeni Lenin. M. G. Fedorenko began milking cows. Over 40 persons went to the work sectors of the Khabnoye Sovkhoz. Today there are new and more important tasks.

First Secretaries A. S. Gamanyuk and N. I. Priymachenko invariably get together at 2130 hours. The gorkom concerns itself with strengthening the staff of AES builders set up recently in Poleskoye. There was pleasant news: the Yupiter Plant took valuable and very necessary equipment out of the radioactive zone. Animal raisers are working in concert. No matter how difficult it may be, daily milk yields still climbed 100 grams in May.

Mopping up the accident's aftermath is a common and principal task for everyone. The work of radiological decontamination of the electric power station, the roads and nearby grounds is gathering scope. The city and its houses will have their turn. Finally. It is an important time, and especially for the party members.

Although the overwhelming majority are up to the task, some nevertheless shirked. The party gorkom buro recently examined actions by heads of the Chernobyl affiliate of the Yuzhatomenergostroytrans Association. They were indifferent to the people and to the job. Chief Engineer A. G. Shapoval was expelled from the party by decision. Chief A. G. Sichkarenko was given a severe reprimand with entry in the record. Party Organization Secretary A. I. Gubskiy also was punished for insufficient exactingness.

But we repeat that this is the exception. Everywhere there is genuine heroism and courage! And as always, people are drawn to the party in days of difficult ordeals. Some 20 firefighters: A. G. Kedrov, deputy chief of the reactor shop; V. V. Bokov, brigade leader of builders; S. G. Pichurin, foreman for labor safety and safety techniques, and others submitted applications with the request to be accepted into the ranks of party members.

Gardens are blooming in the AES region. Life gathers strength and goes on. As before, there are marriages in Poleskoye. The ZAGS [registrar's office] also was allowed to register the evacuated persons.

"Fitter-assembler Visiliy Perepelitsa and ORS [worker's supply department] cashier-controller Vera Govdish registered today from Pripyat," says the manager. "Now petitions have come from six at once."

Yes, things are getting better!

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## EVACUATION

### 92,000 EVACUEES RECEIVE FINANCIAL AID, CLOTHING

Kiev PRAVDA UKRAINY in Russian 13 May 86 p 3

[Article: "They Extended a Hand of Fraternal Help: The Entire Country is Participating in Mopping up the Aftermath of the Accident at the Chernobyl AES [Atomic Electric Power Station]"]

[Text] TASS-RATAU—On the eve of May Day, tens of families of builders of the Khmel'nitskaya Nuclear Electric Power Station received orders for apartments. The families of fitter Vitaliy Volkovinskiy, driver Ivan Maksimchuk, operator Anton Lavrenyuk and others were preparing for a house-warming. But then came news of what happened at the Chernobyl AES, and soon the families of power workers evacuated from Pripyat arrived in the settlement of Neteshin. It was then that the Khmel'nik builders decided that they would give up all 144 apartments to the Chernobyl residents so that everything would be fine at the new place for them. This will smooth the difficulties which fell to their lot. But what is important is not only that the doors of a new home swung open for them; it is that the hearts of people also opened up and surrounded the Chernobyl residents with attention and concern.

Telegrams and letters come from all around the country to party, soviet and economic bodies of the republic and of Kiev Oblast from labor collectives and Soviet citizens in which they offer specific help in mopping up the accident's aftermath. The high humanism, sensitiveness and selflessness of the Soviet citizen again is revealed in an hour of ordeal, and a readiness to come to help is displayed. In a village gathering toilers of the Chernigov Pravda Kolkhoz decided to transfer R4,000, their bonus received for winning a competition of the republic's grain growers, to the assistance fund for Chernobyl residents. And Nikolay Yakovlevich Kosenko, a war veteran and pensioner from the neighboring Ukraina Kolkhoz, offered R200 from his personal savings. Builders of SMU [Construction and installation Administration]-1 of the Vinnitsapromstroy Trust earned a large bonus, R2,500, for vital work in the first quarter. At a workers' meeting this collective decided to transfer its bonus to the victims.

A fourth of the drivers from Kirovograd took part in evacuating people from the danger zone. They came into contact with the misfortune which descended here and saw everything with their own eyes. They told comrades about this after returning to their collective. "We'll work one day for the Chernobyl assistance fund," they said, and the motor column collective supported them. The brigade

of Hero of Socialist Labor N. A. Tymun stood a vital watch. The Odessa dockers greatly overfulfilled the shift assignment and transferred their earnings to help the victims. This noble initiative also was taken up in other labor collectives of the Black Sea city. Workers of the tube-drawing shop of the Dnepropetrovsk Tube Rolling Plant decided to allocate ten percent of their monthly earnings for Chernobyl residents, and the initiative was supported by all the enterprise's toilers. Metallurgists of the Krivoy Rog Metallurgical Combine imeni V. I. Lenin decreed to work a day for the assistance fund for the populace resettled from the vicinity of the Chernobyl AES.

Many collectives are suggesting holding a free Saturday workday, working a shift or workday without compensation, or transferring part of the monthly wages. There are suggestions to open a special account in the Kiev branch of Gosbank. The enormous funds allocated by the state to assist Chernobyl residents and the modest sum which the pensioner wholeheartedly gives from his savings all are evidence of the high humanism inherent in our system, in the Soviet way of life, in our citizens.

The CPSU Central Committee, USSR Supreme Soviet Presidium, USSR Council of Ministers and AUCCTU decree on conditions for wages and financial support of the workers of enterprises and organizations of the Chernobyl AES zone became a specific confirmation of this. Now everyone evacuated (and there are 92,000) has received charge-free monetary assistance and thousands of sets of clothing and sewn and woolen articles. Grain growers of Poltava and Donetsk miners, Kharkov machinebuilders and Odessa dockers, Crimean viticulturists and Zhdanov metallurgists—all the working Ukraine today is helping Chernobyl residents and doing everything to mop up the accident's aftermath as quickly as possible.

All republics extended the hand of fraternal assistance. Welding sets, electrical firefighting equipment and overalls went from Leningrad to Chernobyl.

"No matter where we phoned, no matter where we turned with a request there days, everywhere we met understanding and problems were resolved instantaneously," the correspondents were told by P. I. Mostovoy, chairman of Gosnab UkSSR. "The Russian Federation made a special contribution. Special Aeroflot flights took lead from Sverdlovsk, liquid nitrogen from Volgograd and Balashikha, and freight from Tambov and Armavir to speed up the delivery of necessary materials."

Reserved trains with important equipment set off from Blysk and Chimkent, from Kishinev and Gomel. Thousands of tons of steel pipe, tens of drilling units, hundreds of kilometers of cables, 4,500 trucks, some 800 buses and much other equipment and materials were received these days by the people selflessly fighting to mop up the aftermath of the accident. Leading specialists and prominent scientists from around the country came here.

Republic workers are accelerating the mop-up of the accident's aftermath by vital labor at every workplace.

"The republic's national economy is working persistently," announced Ye. V. Kachalovskiy, Ukrainian Communist Party Central Committee Politburo Member and

First Deputy Chairman of the UkSSR Council of Ministers. "In April Ukrainian industry produced more than R270 million of products above the plan. Miners produced an additional output of R32 million and overfulfilled the power engineering plan."

"We admire the courage of Soviet citizens and their efficiency displayed in a most difficult situation," said Michael (Davidov), correspondent of the newspaper DAILY WORLD, central organ of the U.S. Communist Party, who now is in Kiev. "Our rightist press in the West is spreading cock-and-bull stories about what happened at the Chernobyl AES. What we see here clearly refutes the malignant fabrications. Those colossal efforts being taken to ensure people's safety and concern for their health and for mopping up the accident's aftermath generate respect."

The help going to the Ukraine from all corners of the Soviet Union and our firmness in the face of the unexpected disaster blocked its path. And those in Chernobyl who are waging a difficult duel today with the atom which broke out from under control know that the entire country is with them.

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## EVACUATION

### ADJACENT RAYONS TEEMING WITH EVACUEES

PM201545 Moscow SOVETSKAYA KULTURA in Russian 13 May 86 p 8

[Special correspondent L. Virina "On the Spot Reportage": "This Is the Source of Our Strength, This Is Our Mainstay!"—first paragraph is SOVETSKAYA KULTURA introduction]

[Text] The consequences of the accident are being eliminated day by day at the Chernobyl AES. The life of people evacuated from Pripyat, the AES satellite city, and the population centers close to it is getting back to normal. Our special correspondent visited Kiev Oblast rayons adjacent to the accident site.

Kiev Oblast--The Polesskoye settlement, teeming with people and motor vehicles, almost borders the now deserted 30-km zone around the nuclear power station. A notice board displays the sign: "Location of Prip'yat Enterprise Headquarters." Written notices supplying operational information rustle on the doors of the local movie theater. The headquarters of one plant from the power workers' city, located here, tells evacuees where to go for employment documents, Komsomol registration, and material assistance.

The registration of school pupils being sent to the "Molodaya Gvardiya" Young Pioneer camp near the Black Sea coast is almost completed at the premises of the rayon House of Culture. More than 400 surnames are already included in the lists compiled by Nadezhda Yegorovna Silchenko and Vladimir Zinovyevich Tarasov. They are both from Prip'yat; she is a specialist from the city's Public Education Section, he is a director of a children's and adolescents' sports school.

"Our life here is properly organized," Vladimir Zinovyevich said. "No one can get lost. The entire country is concerned about us, and we are backed by so many warmhearted people." He describes how cordially he and three other residents of Prip'yat were welcomed at the home of a couple in Polesskoye: "No sooner have we got up in the morning, and they call us: 'Come on, guys, breakfast is on the table!' When the weather got colder, they brought out their sons' suits: 'Help yourselves, we have all sizes here.'" Not a single one of the 36 field kitchens set up in the rayon was needed! Families in Polesskoye supplied the evacuees with food.



Nadezhda Yegorovna Silchenko speaks enthusiastically about Oleskey's teachers, who managed in a matter of a few hours to organize textbooks, exercise books, and school places for children from Pripyat (on that day the rayon's schools received 2,419 pupils), and mentions to some her colleagues from the area who had been elsewhere but, at the first word about what had happened at the AES, made their way here so as to be together with everyone. And she draws the firm conclusion: "We are supporting each other, therefore we will get over everything." An hour later Dina Genrikhovna Khmelevskaya, chief of the Pripyat City Public Education Section, who obviously has not had a full night's sleep for some time now (swollen eyelids, pinched-looking delicate face), emotionally supplements the narrative about the hospitality with which the neighboring rayon welcomed the temporary immigrants: "So much kindness, and our children, despite everything they have been through, are children again. Only once did a third-grader break out in tears at his desk: All the others were wearing their Young Pioneer ties, while, in all the rush, his had been left behind at home." Pripyat City Soviet deputy Khmelevskaya was responsible for the evacuation of the first microrayon on 27 April: "It seemed as if the unexpected misfortune would paralyze people, but it actually mobilized them. Less than 1 hour was needed to assemble everyone, 50,000 persons had left 2 hours later, and there had been no pushing or panic. People were trying not to speak louder than normal so as not to frighten the assembled mass."

[PM201547] The AES workers are also working calmly, hoping to return.

Nikolay Grigoryevich Oleshchuk, chairman of the AES electrical workshop trade union committee, received an "alarm" signal summoning him to the power station at a few minutes after 0300 hours 26 April. It was less than 2 hours after the accident, the firefighters were still fighting the fire, and it was already known: Calamity. Oleshchuk had been planning to spend that spring Saturday with his family in the forest. He was looking forward to a rest, and found himself in combat: "At that time, following the alarm signal, I spent 3 whole days at the station. The situation was most difficult, but we, who had spent about 10 years each at the shop, did not even think of the possibility of letting anyone replace us at our posts. Senior foreman Aleksandr Vasilyevich Sukhomlinov and Petr Petrovich Kozhanov and senior duty electrician Yuriy Ivanovich Rusnak were next to me, shoulder to shoulder. This is what makes us strong--reliability." A splendid face, confidently powerful hands. These hands are probably used to carpentry tools, fishing rods, and ordinary good deeds. Actually, what Nikolay Grigoryevich Oleshchuk and his comrades are now engaged in is perhaps the best and most heroic of existing deeds. For him it is ordinary.

"I love this city, everything in it is for the better, for people. We were planning to inaugurate a remarkable Komsomol park on May Day. A city with such a future! I will not be able to live without it. Anyone departing now to work at other enterprises leaves his address without fail: 'Let me know as soon as the station resumes work. I will not be able to consider myself a man if I do not return.' To be honest, I personally did not expect our people to be so closely rallied. One person is another person's friend,

comrade, brother--and these are not just empty words. This is our mainstay!" And he suddenly asked: "Would you like to see our wall newspaper? We published it for Victory Day." The following lines in the wall newspaper ATOMSHCHIK were written by I. Prelovski, senior operator of the circulating pumps: "The shift was carrying on with its normal duties 26 April. All workers remained in their positions when the accident was announced. An accident team was formed 15 minutes later to help the No 4 power unit personnel. Not a single person abandoned his work position until the end of that shift and of all subsequent shifts. Our entire collective heard with indignation the slanderous statements by Western newspapers about 'thousands of victims and mass destruction at Chernobyl AES.'" The text of this amazing document, the wall newspaper, suddenly brings to life episodes which occurred in those days. Here we have the "radiation control" in action at the approaches to Polesskoye--radiation monitors in respirators and protective clothing thoroughly checking the condition of the atmosphere and the soil, unintentionally bringing to mind the proximity of the No 4 power unit. Here we have people filling in documents to obtain new television sets, accordions, and chairs for the clubs. Here we have an emotional veteran presenting flowers to the leader of a kolkhoz amateur dance group after the people from Ivano-Frankovsk had staged a show at Borodyanka. Evacuees were polled in Kaninovka Village. Many of them responded: We want to live nowhere but in our own city, we want to return quickly to our homes and our nuclear power station.

Meanwhile, beyond the borders, foreign voices are trying to outdo each other in heartrending hysterics about the "nuclear desert" which has engulfed the city's white-stone apartment blocks and the power station units, about the "thousands of deceived and helpless victims" supposedly annihilated by the "unprecedented explosion" or "having fled forever from their own homes in panic and terror...." What terror are they screaming about if people here are not only working selflessly but also finding time for leisure? Some 30 agitation and culture teams from all corners of the Kiev region visited the area in the first 10 days of May alone. The Ukrainian State Concert Association team, headed by V. Timokhin, Ukrainian SSR people's artist and party bureau secretary, arrived in the rayon right in time for May Day. The oblast Philharmonic Society sent the "Korchagintsy" Komsomol and Youth Ensemble and a concert group headed by communists to Ivankovskiy Rayon, which is also adjacent to the evacuation zone. Chilean Bernardino Correa, soloist with the Philharmonic Society, joined the group at his personal request: "I must be wherever things are much more difficult for people than they are for me, where I can boost their bravery."

[PM201549] ...Victory Day at the square in Borodyanka, still in the same rayon which has offered refuge for evacuees, this time from Chernobylskiy Rayon; the brass band was thundering out, young pioneers had their hands full of pine branches tied together with ribbons, and the combat orders shown somehow more brightly on the veterans' chests. Nikolay Sergeyevich Mironov, first secretary of Borodyanskiy Party Raykom, and Anatoliy Nikitovich Amelkin, first secretary of Chernobylskiy Raykom, stood next to each other on the platform and delivered short speeches one after the other.

Hero of the Soviet Union Grigoriy Ivanovich Shevchenko, Great Patriotic War serviceman, also spoke. It turned out that all three speeches were on the same subject--heroism in combat and heroism in labor are inseparable. This is the guarantee of victory!

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## EVACUATION

### KIEV DAILY EDITORIAL ON ACCIDENT

AU220826 Kiev PRAVDA UKRAINY in Russian 14 May 86 p 1

[Editorial: "Soviet Man"]

[Text] The Soviet people are in a working mood. From the Baltic and the Carpathian Mountains to the Pacific Ocean, from the remote northern islands to the sunny oases of Central Asia, the Land of the Soviets lives and works in the rhythm set by the 27th CPSU Congress. The newspapers reported recently on the successes scored by Donbass miners, Magnitka metallurgists, and Leningrad machine builders, and on corn seeding completed by Orlov Oblast farmers. Each report of this kind finds a joyous response in our hearts: the more we do today, the better will we live tomorrow and the stronger will be our homeland--the reliable bullwark of peace on earth.

On these spring days, the disturbing report on the accident in the fourth block of the Chernobyl AES struck a discordant note. Both at the beginning, when not one of us realized the proportions of the danger, and later on, when we had a clearer picture, all of us Soviet people responded to it in the same way: the country and the party will do their utmost to eliminate the effects of the accident as soon as possible, and to protect the lives of the people who found themselves within the danger zone.

We proved to be right. In the Land of the Soviets, man is the most valuable capital. The evacuees from the 30-kilometer zone--and their number today is close to 92,000--have been accommodated in the rayons adjacent to Chernobylskiy Rayon. They have been provided with dwellings, medical assistance, and consumer services. Allowances are being paid to the victims to acquire things lost during the evacuation. The state is according free places in health resorts, resthouses, sanatoriums, and dispensaries to mothers with children.

In this disturbing time, all people have proved to be reliable in the Soviet way. There was no panic whatsoever, everyone was conscientious in discharging one's obligations, one's duty. The results speak for themselves: within 2 hours, practically all Pripyat population--about 40,000--was evacuated by 1,100 meter buses. These figures illustrate the indefatigable toil performed by drivers, physicians, militiamen, pilots, by all party, administration, and economic organs.



The best features inculcated in people by the Soviet way of life have brilliantly made themselves evident in eliminating the accident. These features are: faithfulness to one's duty, endurance, preparedness for great deeds, benevolence, heartfelt generosity, and the aspiration to heal as soon as possible the wounds inflicted by the calamity.

...Major Leonid Petrovich Telyatnikov, chief of the fire unit placed on a war basis to protect the AES, and his subunit spent at the station, from the moment of the accident, nearly 3 hours. They did what mattered the most: took the fire under control, blocked up the sources, and prevented fire from spreading over to the other blocks of the station....Their exploit will never be forgotten.

...Having learned about the accident, dozens of drivers of the Kiev motor transport unit No 09124, to a man, drove their vehicles to the AES settlement and worked there nonstop as long as the situation required.

...On that last April Saturday, many Kiev physicians reported to their hospitals and polyclinics to offer their services to the victims. More than 1,300 physicians, nurses, laboratory assistants, radiation supervisors, and 240 ambulances--this is the medical disembarkation unit engaged in the area of the Chernobyl AES. Their mission is the most noble one: to protect people's health.

..At Blidcha village in Ivanhovskiy Rayon, pensioner A. Ya. Leshchenko, who has a family of 5, has received 10 persons from Chernobyl, and I. Kovalenko, employee at the Radyanska Ukraina kolkhos at the same village, has sheltered 7 persons. How many more such examples of kindness and sympathy there are!

The country is sending today to Chernobyl everything that is needed: machines, materials, drugs, and equipment, as well as the best scientists, specialists, engineers, and workers. All republics have offered the hand of fraternal assistance. Welding devices, electrotechnical firefighting equipment, and overalls have already been delivered to Chernobyl from Leningrad. To hasten the delivery of the necessary materials, the Aeroflot has delivered by special flights lead from Sverdlovsk, liquid nitrogen from Volgograd and Balashikha, freight from Tambov and Armavir. A striking characteristic of the Soviet way of life is to share both joys and difficulties.

The following fact is very eloquent. On the first days alone, thousands of the Ukraine's working people applied to party and administrative organs for jobs in eliminating the accident. Those assisting Chernobyl today are Donetsk miners, Zhdanov metallurgists, and Crimean vintners. The entire Ukraine is doing the utmost to eliminate the consequences of the accident as soon as possible.

The most difficult sectors have been manned by the communists. Neither fatigue nor disorder in living conditions would stop them. They take upon themselves a double load, and have hands for everything: to normalize life at the AES settlement, to eliminate the accident at the AES itself, to

accommodate the evacuees, and to provide them with dwellings and jobs. Their clear orders, encouraging words, and personal example support, inspire, and redouble the energies of all.

[AU220827] The prestige of the party is high. This is particularly evident at times of trial. The best of the best also apply now for admittance to the ranks of the Leninist CPSU. Among them, there are workers, specialists, people of many professions and official ranks.

One cannot read without emotion the letters streaming now to newspapers, radio, and the organs of state authority.

In its cable to PRAVDA UKRAINY, the family of a Kherson driver, A. Savchenko, calls on the Soviet people to work one day extra to assist the victims and to compensate for the losses.

A Rovno pensioner, P. Polishchuk, has resolved to pay his monthly pension to the relief fund for the benefit of the victims.

The January Insurrection Heavy Crane Building Production Association in Odessa has paid to the same fund the money earned on 11 May.

Here he is--Soviet man and true patriot educated by the party, by our entire way of life. He always guards the homeland, and he always triumphs.

How pitiable, against the background of Soviet man's heroism, staunchness, and generosity, are those bosses of American capital and NATO countries who are trying to use the accident at the Chernobyl AES for their profiteering and dirty purposes, trying to slander our humane system and our people. All that is in vain. The citizens of capitalist countries themselves are unmasking them and are filled with indignation at the shameless lies produced by scribblers hired by moneyed bosses.

What happened at the Chernobyl AES prompts one to think once again how formidable are the forces linked with atomic energy. This energy, even when used for peaceful purposes, calls for strict control. Even the very possibility of enormous radioactivity produced by nuclear explosions appearing in the natural environment is absolutely inadmissible. This goes against nature and against man.

The Soviet program for peace, the program for fully eliminating nuclear weapons, offers the only real path to the delivery of mankind from the threat looming over its existence, over nature, and over the entire planets.

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## EVACUATION

### TRANSPORT WORKERS DISCUSS AREA EVACUATION

LD170225 Moscow Domestic Service in Russian 1435 GMT 16 May 86

[Interview with Chernobyl area transport workers by Vladimir Golashenkar on the "Red, Amber, Green" program]

[Text] The accident at Chernobyl has become our common calamity. In Kiev it is reported that many towns in the country are today offering to send drill operators, tractor drivers, and builders to where it is most dangerous. Every day we find out about new demonstrations of selflessness by the Soviet people, who are at times risking their own lives and health in doing everything possible to eliminate the consequences of the accident at the AES. People of many qualifications and professions are working intensively. In this report by Vladimir Golashenkar, who is not a regular member of our staff but rather an employee of the State Vehicle Inspectorate Directorate in Kiev, the vehicle transport workers and employees of the State Vehicle Inspectorate are interviewed.

[Golashenkar] None of the old residents of local places can remember when the Kiev-Chernobyl road has ever seen so much traffic. Although it is early morning, right now convoys of trucks carrying sand, building materials, and food products are going to the station in a continuous flow. Here one can catch sight of vehicles from many regions in the country. And now, at my request, the inspector is stopping a special machine for transporting concrete, a mixer. Let us get introduced to the driver.

[Karvat] I am Vladimir Vladimirovich Karvat. I work at the building directorate at the Khmel'nitskiy AES. Here we are now rendering assistance. Right now builders are faced with the immediate task of covering the damaged reactor with concrete. Therefore, we are transporting concrete directly to the reactor. The conditions at the reactor are normal. People are working, fulfilling this emergency work in protective suits and respirators. We are trying to deliver concrete speedily so that the people there can work continuously. Well, right now I am driving back from there and my vehicle has been cleaned twice with a special solution and has been decontaminated; now there is no cause for concern.

[Golashenkar] The additional posts of the State Vehicle Inspectorate are providing the drivers with great assistance. One of these posts is situated not far from the 30 kilometer zone. Let us talk to the deputy commander

of the subunit of the road patrol service of the [words indistinct], senior lieutenant of the militia, Georgiy Nikolayevich Bereznoy.

[Bereznoy] Our main task is to ensure the continuous movement of transport in the direction of Chernobyl. Going in this direction are vehicles transporting various types of freight to eliminate the consequences of the accident. We are diverting transit transport along bypass routes so that these vehicles do not block the transport to which we are giving the green light.

[Golashenkar] I see that radiation supervisors are also working here.

[Bereznoy] Yes, a radiation monitoring service has been organized at this point. We have to practically stop all of the transport flow that is going in the direction of Kiev. In the event the residual radiation shows up, these vehicles would undergo decontamination here, and after that they go to Kiev.

[Golashenkar] Right now, when the conditions at the station have normalized, of course things are proceeding more calmly for everyone. But what was it like for the first people to make journeys there? Talking about this is a driver from Vehicle Transport Enterprise No 09-111, Anatoliy Origoryevich Milevskiy.

[Milevskiy] Well, the alarm was sounded at our place. A convoy was formed and we departed for the town of Pripyat. We understood very well that if an evacuation had begun there was a threat against our health. But no one gave a thought to this. Though there were only a few of us, there may have been thousands or tens of thousands of people waiting for us there. We were duty-bound to take them out. This is our duty, first and foremost; our civic duty. And no one thought about the possible consequences. This was all based above all on helping people.

[Golashenkar] Well, how many vehicles were put into action there?

[Milevskiy] A lot. You know, I do not know any exact figures, there were thousands of vehicles, more than a thousand buses alone, not to mention trucks and so on. There was no panic at all. Workers of the State Vehicle Inspectorate were there around the clock. I was there twice, for a first time, and then for a second time at night. In general we had to drive only at night, and everywhere on the roads there was order. We knew precisely the direction we were to travel. And if something was not clear, there was a State Vehicle Inspectorate worker on every corner, at every crossroads. He would always explain to us. We knew that we were not abandoned, not alone, that we would always be helped and assistance would be rendered.

[Golashenkar] How did people react to the evacuation?

[Milevskiy] Well, you know, I was struck by the fact that it was very calm. People who had been working at the AES knew about the possible consequences of this and knew what could happen to them. But there was not any



panic at all. People were distributed very precisely alongside houses or beside house entrances. At the command of the man in charge, everyone got into the buses and we drove them out of the danger zone. The welcome by the local population was very striking. People welcomed us. I am young and of course I do not know what war is like, but I had the impression that it was like the way refugees were welcomed during the war. They immediately offered food and shelter. People helped in every way they could. The rayon bodies worked very well, and once again the State Vehicle Inspectorate accompanied us everywhere on the roads. There were no jams or congestion anywhere. It may have been a really huge convoy of more than a thousand vehicles, but we followed the whole road smoothly, in a measured fashion without any delays.

/9365

CSO: 1800/447

## EVACUATION

### TRANSPORT WORKERS' EFFORTS DESCRIBED

PN201451 Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 16 May 86 p 4

[Z.I. Tkachenko Report: "At the Command of Duty"]

[Text] Two general's uniforms--militia and motor transport, with their chevrons, stripes, and service caps--were sent to be destroyed in accordance with safety rules. The generals who had worked in them, fully aware of the possible consequences, had led their subunits into the accident zone, helping power engineers, rescuing people, bringing order. And not one among the thousands of people doubted that it was worth going in after them and risking their necks and their health.

Arriving in Pripyat at dawn on 26 April, Militia Major General Berdov could not believe his eyes: There was a fire blazing to the side of the industrial area, while here, with Saturday laziness, taking its time, the city was waking up. Stores were opening and the streets were filling with passers-by: dressed in light summer clothes, with their children, from early morning they had been hurrying off to the countryside. It must be said that places are not often so surprisingly beautiful: the cleanest of rivers, the Berendeyevskiy woods, cherry tree glades, beaches, places for fishing.... Long, festive days lay ahead.

He knew that over there, in the fourth reactor unit of the nuclear power plant, Major L. Telyatnikov and 15 fire-fighting teams were waging a desperate struggle against the fire, trying to close it off from the neighboring reactor unit, or, to be more precise, seal it off [zakryvaya yego soboy]. And although he was bursting to go and help, it was clear from the first few moments that the main problem was here. The thousands of unconcerned families in holiday mood who were unaware of the danger.

"The zone of the power plant, the city, and the surrounding area was cordoned off, with enlisted men and colonels all on duty, the only thought being to seal off access more quickly, more tightly, and more securely," Gennadiy Vasilyevich relates. It soon became clear that Prip'yat had to be evacuated. Divisional inspectors were assembled, the city was divided into sectors, and an emergency evacuation plan was drawn up together with leaders from the ispolkom. At the same time a column stretching 15 km led by V.M. Reva, first deputy minister of the republic's Motor Transport Ministry, was moving from Kiev to Chernobyl. At 2000 on Saturday he was called to see K.I. Masik,

deputy chairman of the republic Council of Ministers. The ministry immediately set up an operations headquarters and made the necessary calculations, and after midnight 1,216 large buses and 300 trucks with their own means of communication, dosimetric and health services, and repair shop, accompanied by city automobile inspectors, set off on their journey.

"The guys were tremendous," driver Zhukov of Motor Transport Pool 09111 tells us. "The enterprise chiefs, heading their own columns, explained what it was we were going to. Many of them set off on this trip tired after completing their shifts on the city routes. They made the decision themselves."

At 1400 they were given the command to enter the zone. Komsomol members S. Danilov, P. Gutnichenko, V. Kolomiyets, S. Levanda, and the other drivers smoothly brought the buses up to "their" stops. What they had feared--panic, tears, and crush--did not happen. Even those whom the evacuation had caught in light clothing got into the vehicles without any fuss, seating their children as comfortably as possible. The organization was exemplary. No unnecessary words, no sighs, no complaints. What had to be done had to be done. Members of the militia and ispolkom and party gorkom personnel went round the apartments in the evacuated blocks once again. What if someone were left behind....

The buses set off. In the space of 2 hours and 45 minutes more than 30,000 people were evacuated from Prip'yat to be taken to Poles'skiy, Ivankovskiy, and other rayons. One day, for sure, this labor feat by the bus drivers would go down in history, but for the moment, with professional concentration, they transported the people entrusted to them, and only when they reached their destinations and saw gates and doors thrown open wide to right and left and residents welcoming the new arrivals into their homes and to their tables did they finally relax. They were starting their third day without sleep.

I am sitting in the office of V.M. Reva, republic first deputy minister of Motor Transport Ministry. After five days in the hospital he has come back to work. The communications panel is flashing signals. There is call after call. Transport specialists offer assistance, and most of the conversations are concise, informational, and efficiently businesslike. The ministry is very busy now. In response to a priority demand from the government commission working at Chernobyl and the scientists, everything necessary is being sent to the damaged reactor. Specialists are being conveyed to and from work and food is being sent into the affected zone, to the evacuation areas, and to Kiev. There can be no time-wasting here: There must be the maximum reliability and efficiency.

Aleksandr Nikolayevich Artemenko, a deputy minister in charge of the operations headquarters, pores constantly over a map of Kiev and Zhitomir oblasts. In the top right-hand corner is a 30 km zone around the fourth reactor unit, shaded blue. A 60 km elliptical red patch spreads beyond its edges. A situation has arisen in the last few days and requires explanation.

To understand it better we went back, with Vitaliy Mikaylovich Reva, to those first days after the accident. The people from Prip'yat had been shipped out. The buses had to go back on the streets of Kiev. The radiation monitors

spread their hands--it was impossible, they were "cracking." Where could such a huge number of vehicles be decontaminated?

It was decided to set up decontamination centers. Deputy Minister N.P. Voloshin took over from Reva. Nikolay Petrovich says: "Literally in the field the Ukraine Motor Transport Construction and Installation Trust [Ukravtoremstroy] appropriated R126,000 in a little over 24 hours. By the night of 1 May lights were already burning and work was in progress at the vehicle wash. Everything necessary was here: communications, workers' rest stations, food, a highway, and special tanks for collecting the polluted water. We must extend many thanks to Nikolay Fedotovitch Yermak, chairman of the May Day kolkhoz. He is a generous, sincere, efficient man. He gave everything we needed and helped in every way he could."

Nikolay Slobodyanik, chief of the local "Ukravtoremstroy" repair and construction administration, with a broken leg in plaster, welded structures and pipes and operated a bulldozer. He placed the most experienced people in the vulnerable areas. Stonemason Petr Miroshnik worked without a break for days, sanitation engineer Aleksandr Deruzhinskiy conducted the water along a 1.5 km temporary pipeline, and the excavator operated by Aleksandr Regeda moved earth without any trouble.

The second evacuation, as they are calling it here, was more complex. Evacuating people, products, and documentation from the local Chernobyl foundry and cheese plants, the sewn goods factory, and other enterprises now no longer presented any particular difficulty. There was experience. But when it came to the countryside, not one owner was willing to leave until he could be sure that his cow or pig had joined the general herd. "If it is alive, how can we abandon it." The countryside could not be evacuated until the livestock problem had been resolved. The vehicle drivers understood this immediately.

As many as 1,500 livestock transporters and trucks sent by the agroindustrial sector passed through the zone girdling Chernobyl. Another five centers for the decontamination of rolling stock had to be set up, electricity substations and highways constructed, and pipelines laid. Boots, breathing equipment, and special clothing had to be brought in. And so a zone of the most vigorous human activity appeared 60 km out.

Supply pipes? Nikopol? You have them," Artemenko says and replaces the receiver. A glance at the map. The Yuzhnotrubby plant is closer to Zaporozhe than to Dnepropetrovsk. He makes a decision--the Zaporozhe people will transport the pipes. A call to his enterprise: get ready. A call to the plant: "Hello? Everything is ready. We are waiting." Then a call to the aviators: "The pipes will be brought to the aircraft at 1800. Transport is ready at the aircraft steps in Kiev."

A few fragile moments of quiet. Aleksandr Nikolayevich turns to us. "In 'peacetime,' he says jokingly, "I did not even know there was such a person as Leonid Vasilyevich Pogrebnyak, deputy chief of the transportation department in Borispol. But we have become real friends in just a few days--as thick as thieves. How many days this work has gone on! Lead, powdered dolomite,



equipment, and cement have been brought in from everywhere. Latex is now on the way. They are already expecting it at Chernobyl. A plane from Kazan will be landing in an hour's time. An urgent, superurgent cargo! Control and transport schedules have been precisely worked out."

The situation here is so businesslike and confident, there seems to be nothing to it. Any wish you can think of: It must be done, so it will be. A call from the bank: "Please don't worry about wages!" "Good Lord! When did they last call like this!" Everyone laughed. In extreme conditions we can work accurately, in a coordinated manner, and without any urging on, without paper, without fuss. What has happened to all the bureaucrats and the people who like to play safe!

A very great deal now depends on motor vehicle drivers. Eight rayons in Kiev Oblast, 12 in Zhitomir Oblast, and 4 in Chernigov Oblast plus Kiev have "dropped out" of the normal agricultural supply system. Products, vegetables, and everything else have to be transported. Everyone greatly needs the assistance of motor transport workers: they need fuel, trucks, buses, and particularly refrigerators.

The damaged reactor still requires tireless concern. Work is being carried out in stints. From the pioneer camp in the village of Bucha, where the motor vehicle drivers are based, they drive out to the AES site. The length of the stint depends on the situation. Until quite recently people were brought by motor vehicle as far as a certain point. Then they were transferred to military vehicles. Now work is going more calmly at the plant. Power engineers, drillers, miners, and construction workers are confidently going about their work.

Vilcha railroad station. We are 60 km from the reactor. It is here that the main forces of the offensive on the damaged reactor unit are now concentrated. As many as 250 cement carriers, more than 100 dump trucks, and 500 motor vehicles for various purposes are taking part in the work. A direct road was built in an unconceivably short space of time. Continuous concreting must be carried out in accordance with a unified technological system. There must be no hitches.

"I must say that N.S. Gorbachev's speech, which we heard on the radio, gave us extra strength," Petr Aleksandrovich Dvorak, team leader and communist, says. "What a lot of attention is being devoted by the Soviet government and the entire country to those at Chernobyl, what resources have been brought into play! All of us specialists working here are concerned to ensure with all the forces at our disposal that the effects of the accident are eliminated with the necessary dispatch. My transport workers comrades are grateful to the CPSU Central Committee general secretary for his high appraisal of our work.

The situation is constantly changing: We had barely gotten back from Vilcha when a new variation was found. The Tolstyy Les railroad station, 40 km from the reactor, some 2,000 metric tons of cement were delivered yesterday, 3,600 today. The schedule is a law, to quote Academician Vlikhov, from echeloned defense we have now gone onto the offensive.

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## EVACUATION

### AUTHORITIES PATROL, PROTECT EVACUATED AREAS

LD210840 Moscow Domestic Service in Russian 0700 GMT 21 May 86

[Report by special correspondent Vladimir Mikyalenko from the Chernobyl AES]

[Text] The patrol cars of the Chernobyl section of internal affairs do not stand still for long. They go out from here [location not specified] around the town and throughout the whole rayon where until recently about 50,000 people were living.

On this armored carrier which is now just going up to the two-story building of the town police section. I have just met the group under Colonel of Police Aleksandr Nikolayevich Vasilyev. Aleksandr Nikolayevich, what does the powermen's town look like now?

[Vasilyev] The powermen's town now looks empty. It is [word indistinct] and silent on the balconies. There are not even any animals because recently we moved even animals away. At the same time, we must protect the town with the forces of the police and troops, with the aim of protecting the property of the town after the evacuation. As you read in the papers and as was reported on radio and television, it took place in a very organized manner. The people entered buses which were provided and drove away. It was very quick. Therefore, things were left behind--valuables. Here and there lights were left on in the apartments; some did not turn off the fridges. There are valuable things around like money, savingsbooks, and documents even. So groups of police are on duty there round the clock.

At the beginning we went on duty on foot but later, on the advice of doctors, we only went on duty in patrol cars and now in armored carriers.

The town has been divided up into areas, and into houses. The group drives up and examines every house. If they see [word indistinct] the seal which we left there before, they go round all the flats. If everything is in order, we come out and seal it. In the evening there are also groups on duty. If the shift reports that during that time they saw a light in this or that flat, that they went in and there was no one there, then we go into the flat again and have another check.

What can I say? Twenty days have passed since the incident, and there has not been a single theft, not a single break in, nothing at all. It is true that on several occasions some inhabitants have appeared, with their passports for their property. We explain to them: Please get out as quickly as possible, and in an organized way we [words indistinct].

The latest incident was when we removed an elderly woman of 80, and told her straight that she must go [words indistinct] and first aid, and representatives of the town executive committee, and the police of course were there, and I spoke with her. A car took her to the [word indistinct] hospital where they examined her. She was all right. Furthermore, we have now decided to connect the flats to our control desk. The desk is in a closed room, so that we shall be using less physical force, because until such time as the town is no longer affected by the results of the accident we shall protect it. And afterwards everything there will be the same as it was before.

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CSO: 1800/447

## EVACUATION

### CAPTAIN PRAISES MILITIAMEN AS PROTECTORS OF LAW, ORDER

Minsk SOVETSKAYA BELORUSSIYA in Russian 21 May 86 p 3

[Article by S. Tivanov, captain of militia, under rubric "From the Site of Events": "As the Heart Commands"]

[Text] The first to feel the effects of the fire were the fighting men in V. Pravik's guard crew, and soon thereafter all the personnel in the militarized fire unit to protect the Chernobyl nuclear power plant. There have been detailed reports in the press about the exploits performed by the firemen, thanks to whose bravery it was possible to put the raging fire under control and to prevent the accident from spreading. That very night one of the first-priority tasks in eliminating the consequences of the accident was the strictest enforcement of public order, organizational spirit, and discipline.

Others who matched their Ukrainian associates in performing in a time-responsive and well-coordinated manner from the very inception of the task and under such unusual conditions were the workers in the Braginskiy, Khoynikskiy, and Narovlyanskiy ROVD [rayon departments of internal affairs]. An area within those rayons was partially included in the 30-kilometer evacuation ring around the Chernobyl nuclear power plant. On the very first day all steps were taken to ensure calm and order.

Persons who worked constantly for dozens of hours at a time, taking practically no time even to shut their eyes, were: Major of Militia N. Kharkov, Captain V. Kozlov, Senior Lieutenant N. Murga, Junior Lieutenant N. Novik, and Lieutenant N. Zhuravskaya, of the Narovlyanskiy and Khoynikskiy ROVD.

From all areas of the special zone, lines of communication extended to the operations staff for guidance in the evacuation operations which were being carried out in Khoyniki. The groups made up of Communist Party and Komsomol members, which were formed by the rayon committees of the KPB [Communist Party of Belorussia] and the Komsomol, worked intensively. Equipment arrived from the adjacent rayons, help came from neighboring rayon departments, and a large detachment of personnel arrived from the UVD [Administration of Internal Affairs] of the Gomel Oblast Executive Committee. The fulfillment of the task of ensuring the most rapid evacuation of the population and the protection of the zone was safely secured. A teletype line carries brief reports originating

from the site of the event. Behind their meager content one can sense the highest degree of responsibility borne by the soldiers of law and order for the fulfillment of their official duty.

...After being relieved from his shift, where he had been on duty for 24 hours, Sergeant V. Nevmerzhiyskiy, of the Yelskiy Rayon Department of Internal Affairs, voluntarily entered the evacuation zone and, together with Captain A. Zmushko, Senior Lieutenant V. Filin, Lieutenant V. Piskun, Master Sergeant A. Chuyko, and Sergeants Ye. Kirilenko and P. Myzychenko, continued to stay on duty. Senior Lieutenant A. Dashkevich and militia man-driver, Sergeant A. Bondar, of the Khoynikskiy ROVD, supported the evacuation operations for three days without a break. At the hottest spots, persons who had arrived at the zone from the Braginskiy ROVD worked selflessly: Major of Militia P. Ilyenkov, Senior Lieutenants V. Gaponenko and V. Kalinichenko, Lieutenants N. Dashuk and A. Gluzakov, Senior Sergeant V. Yashchenko, and Junior Sergeant M. Klechenko. A Komsomol-youth crew made up of state motor-vehicles inspector Lieutenant V. Kirpechev, Sergeant V. Isayenko, and Junior Sergeant A. Pilipenko, from the Zhlobinskiy ROVD, successfully fulfilled the task of evacuating the population from the villages of Borshchovka and Lesok, Khoynikskiy Rayon.

The days of working in the strained situation were, for the guardians of law and order, a real test of their strength. And they withstood that test with distinction.

...Life has come to a standstill in the deserted villages and settlements of Braginskiy, Khoynikskiy, and Narovlyanskiy rayons. But they have by no means been abandoned or orphaned. Militia details and operational groups are constantly on duty here. At the entrances to the 30-kilometer zone, one passes through checkpoints. The only vehicles allowed through are special-designation vehicles. Stations for decontamination of equipment which is being returned from the zone are operating here around the clock.

The workers in the agencies of internal affairs operate in three shifts in the special zone. Each shift lasts for 12 hours. After coming off shift, a person is authorized to rest for 24 hours. But many people refuse to do that. After medical examination and a mandatory bath, they go back on duty. "We don't have the right to act otherwise," chief of the Khoynikskiy ROVD, Lieutenant Colonel of Militia L. Zhevnyak says. "The responsibility for guaranteeing order at the rayon center and within the rest of the area outside the zone cannot be taken from us by anyone. And in the situation that has developed, that responsibility is a double one."

"When the time comes, we'll rest. Our place now is here!", the ROVD workers say. Of course, they could rely on the aid provided by their neighbors, the workers in the oblast administration. But can one really replace completely the local workers, or their knowledge of the operational situation and the surrounding conditions? In medical-prevention work and in the prevention of violations of law and order, this is probably one of the chief factors. Therefore the people on duty literally do the work of two people each, paying no heed to their personal needs, rest, or sleep.



Therefore the senior officer in the service for the protection of public order, A. Dashkevich, after serving a tour in the zone, rushes to another end of the rayon on current official duties, as was done repeatedly by militia workers I. Kurbanok, A. Verochinskiy, V. Sapronov, P. Privalov, P. Novikov, A. Kazakov, A. Luchko, and hundreds of others.

They are obliged to do this by their sense of duty to themselves and to others, and by their high vocation as soldiers of law and order!

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CSO: 1800/457

## EVACUATION

### CONDITIONS OF LIVESTOCK, PEOPLE FROM FOUR TRANSFERRED FARMS

Minsk SOVETSKAYA BELORUSSIYA in Russian 23 May 86 pp 1, 3

[Article by SOVETSKAYA BELORUSSIYA special correspondent A. Gotovchits, Khoynikskiy Rayon, under rubric "From the Site of Events": "The Rayon Committee's Assignment Has Been Fulfilled..."]

[Text] The village of Chamkov, where First Secretary of the Khoynikskiy Rayon Party Committee was going with BSSR Minister of Public Health N. Ye. Savchenko, lies at the very border with the Ukraine. From a small elevation behind the village, above the sparse woods, one can see the buildings of the Chernobyl nuclear power plant. Helicopters are hovering constantly above it. One gets the feeling that it is not there.

Things were difficult for people here too in Chamkov, some five kilometers from the nuclear power plant. It was necessary within a very few hours to transfer the livestock to the Strelischevo Sovkhoz. Everything went in a well-organized manner, without any panic. The group of activists in charge of the evacuation was headed by Arseniy Andreyevich Sakun -- member of the bureau of the KPB [Communist Party of Belorussia -- hereinunder BCP] rayon committee.

Chairman of the Rayon Committee of the Trade Union for Agricultural Workers, G. S. Khlimankov, and Instructor at the BCP Rayon Committee, M. F. Malets, did everything to ensure that the personally owned livestock would be transferred within just a few hours. A. A. Sakun and ROVD [Rayon Department of Internal Affairs] worker A. M. Gaponenko, together with the sovkhos animal husbandrymen, sent off the publicly owned livestock.

"The work of our cadres recently has become more coordinated, more concrete. Any mission assigned by the rayon committee or the rayon executive committee is executed without any extra words," D. M. Demichev says.

The general tone in the confirmation of the efficient style is set by the BCP rayon committee. Long before the accident at Chernobyl, a lot of work was done to assure that the entire energy of the managers and specialists would be directed at the resolution of the practical matters. Thanks to this approach, in the past two years it was possible to eliminate (except for flax) the indebtedness of the first years of the 11th Five-Year Plan with regard to the sale of products of vegetable husbandry. The production of milk and meat

began to increase at high rates. During the first quarter of the present year, there was an increase of more than 1.5 times, as compared with last year. That is more than the average for the oblast. The spring sowing operations were carried out in an organized manner. That period had its own peculiarity: from the beginning of the field operations, not a single rural manager was told to report to the rayon. The rayon committee had forbidden it. In a word, the efficiency and concreteness became more confirmed from day to day, and in the complicated situation this repeatedly saved the cadres.

But the situation that had now developed was by no means an easy one. Within a short period of time it was necessary to relocate the inhabitants of four farms, together with the equipment and livestock. For three days the Chairman of the Novaya Zhizn Kolkhoz, Communist Party member I. N. Vasyuk, did not close his eyes. He worked constantly to organize transportation and was worried about people and the farm. He was especially concerned about the dairy herd of 820 head. How would the animals behave at the new location? Would it be possible to restore the productivity that had been increased with so much difficulty? What effect would the relocation have upon the frame of mind of the kolkhoz members and their labor participation? Exhausted after yet another night without sleep, Ivan Nikolayevich went into the office where his headquarters had been set up, and dropped onto the chair...

I was told this episode by the manager of the agricultural department of the BCP Rayon Committee, A. V. Deykun. During this period he too almost never left the kolkhoz. He helped to load the livestock, and he worked in a time-responsive manner to resolve through the rayon headquarters all the questions that arose. He went into the peasants' homes and talked to the people who did not want to leave their homes. In that situation, much was required of the representative of the rayon committee: personal stamina, the ability to argue well, the ability to find a decision quickly, or sometimes even simply to make a joke.

No easy task lay also on the shoulders of those who brought the evacuated people under their roof, who found room for the evacuated livestock, and who tried to find temporary jobs for the people who had arrived. Strelichevo Sovkhoz Director A. V. Martynenko sent the Novaya Zhizn Kolkhoz his radio set so that it could resolve instantaneously any problems that arose. Animal stalls were urgently built at the sovkhoz, milking units were installed, and wells were drilled, to provide water for the animals. The callsigns "Radin, this is Strelichevo calling" could be heard even during the night.

During these May days, the BCP rayon committee operated round the clock. The instructors, department chiefs, and secretaries spent a large amount of their time on the farms. How were the people adjusting to the new location? Did they need anything? Questions were resolved instantaneously, and the only time that anyone drove to the rayon committee was when his own capabilities were insufficient.

The work day was already coming to an end when instructor V. A. Chekan returned from the village of Babchin, where the people from the Pervoye Maya Kolkhoz had been resettled. The people there did not like the decrepit old school building. There were not enough beds or bed linens. Second Secretary

of the Rayon Committee, N. N. Drozd, immediately got in touch with the rayon department of public education and the rayon union of consumer cooperatives. That same evening, space was found for the newcomers at the production-training combine, and they were provided with everything they needed. There was no delay in organizing in the rayon the providing of the evacuees with the services of truck-mounted stores, the payment of pensions and grants in aid, and the delivery of letters and newspapers. But life keeps presenting people with newer and newer problems. Now it is obvious that the evacuees need the services of rental agencies: people have been asking to have refrigerators brought in.

The complicated situation has left its imprint on the work of the bureau of the BCP rayon committee. Two sessions have been conducted, probably the shortest ones in many years. The decrees contain only four lines each. The first dealt with the evacuation of children and pregnant women from the 30-kilometer zone of the nuclear power plant. It was adopted and executed long before the May holidays. The second one dealt with the evacuation of the population and the transferring of publicly and privately owned livestock.

"The rayon committee and the primary party organizations," D. M. Demichev adds, "took under their supervision from the very first days the entire situation in the rayon. There was no time for prolonged sessions. We had to act. There wasn't a single instance of anyone refusing to carry out a job that was assigned."

As soon as the people at the Rayagropromtekhnika Enterprise learned that the animal husbandrymen at the Pervoye Maya Kolkhoz, together with chairman M. I. Novik, had been sent to the rayon hospital for observation, many people volunteered to inspect the livestock again. A brigade from the enterprise was rapidly formed and sent to the animal stalls. And then the BCP rayon committee received a telephone call from its manager. V. G. Zgurskiy reported, "The rayon committee's assignment has been fulfilled."

Now the efforts of the rayon committee, its apparatus, and the party activists are directed at assuring the smooth operation of the production activity of the transferred four kolkhozes and sovkhozes. The tasks have been defined at joint open party meetings of the "old" and the "new" farms.

In Tulgavichi, where many of the residents of the Pobeda Sotsializma Sovkhoz had been transferred, it was decided to accept the evacuated livestock onto the local balance sheet. Many of the resettled animal husbandrymen and mechanizers were assigned jobs at their request. The other villagers were found jobs at neighboring farms that needed work hands.

"The people who have been coming here," secretary of the party organization of the Kolkhoz imeni Zhdanov, I. G. Legun attests, "got to work immediately. People who have been working diligently to cultivate the crops are Communist mechanizers B. P. Prikhodko and N. V. Pinchuk, and animal husbandrymen N. P. Starovoytov and G. V. Stepanenko. The fresh labor resources enable us to extend our operations and to introduce into economic circulation an additional 150 hectares of land. We realize that it is necessary to attempt to produce as much output of vegetable and animal husbandry as possible, so that the

evacuation of the four farms will not have an effect upon the overall indicators for the rayon."

The everyday needs of the evacuees have not been overlooked in Tulgavichi. This is what was done there: from among the evacuated deputies to the Orevichi Rural Soviet, those present at a meeting elected an acting chairman. The choice fell to CPSU member, mechanizer A. P. Abaranok.

"Various everyday problems upset people," Andrey Pavlovich eagerly told me when we met. "They pertain to everyday living conditions, trade services, and pensions. Recently two retirees asked me what they should do about their personal plot. We came to an understanding with the local kolkhoz, to allocate to retirees who wished to take advantage of the offer, as much as 5 hundredths [of a hectare] each, or for working families, 10 each."

Life and work are returning to normal on other farms. In the evacuated collectives, on the recommendation of the rayon committee, nine temporary party groups have been created. The Party members who belong to these groups are attempting to serve as a personal example in labor. Among the milkmaids on the Orevichi Sovkhoz, the first to have her name placed under the flag of labor glory at the temporary field station was CPSU member N. M. Legun. A large amount of labor involving the care of the publicly owned livestock has been performed by driver N. A. Skidanenko, who has been engaged in the hauling of fodders, and by calf-tenders O. P. Kazak and O. M. Avramenko. By their example they attempt to raise the labor enthusiasm of the other people in their village and to increase their energy.

"Under the difficult conditions," party organization secretary I. V. Tishkevich adds, "even those Communists who long ago went into well-deserved retirement have offered whatever assistance they can provide. Retired Party members P. N. Kazakh and P. Kh. Shinkarenko and non-party members N. P. Oreshchenko and P. M. Prishchep work shoulder to shoulder with the animal husbandrymen."

Needless to say, the emergency situation has been unifying the people even more. The Communists and non-party members are striving during these difficult days to do everything that is within their capabilities.

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CSO: 1800/457



## EVACUATION

### KOLKHOZ TAKES IN RELOCATED SOVKHOZ WORKERS, DAIRY HERD

Minsk SOVETSKAYA BELORUSSIYA in Russian 24 May 86 p 1

[Article by P. Belyy, lecturer at the Narovlyanskiy Rayon Committee of the KPB [Communist Party of Belorussia], member of the USSR Union of Journalists, under rubric "From the Site of Events": "People Are Your Brothers"]

[Text] As always, Pripyat Sovkhoz director Yevgeniy Petrovich Vysotskiy was composed, calm, and confident when I met with him. Briefly and precisely he gave reports to the fitters and construction workers, and answered the questions asked by the animal husbandrymen. Those people, in their usual way, without any fuss, are currently working to set up a summer facilities for the dairy herd. The usual workaday rhythm, although it is under conditions that are far from ordinary...

"There are still many difficulties here, although the main ones are behind us," Yevgeniy Petrovich says. "We are working to make up for the shortfall in animal-husbandry output that occurred during the first days after resettlement from the 30-kilometer zone of the Chernobyl nuclear-power plant.

The sovkhoz's misfortune during those difficult days was shared by seven farms in the rayon. A special amount of help was given by the collective at the Kolkhoz imeni XXII syezd KPSS. That collective not only welcomed the people warmly and found room for them, but also, within the shortest period of time, created the conditions for the economic activity of the resettled sovkhoz. On an animal farm in the village of Dvor, they turned over summer facilities 800 head of livestock, allocated 87 hectares of cultivated pastures nearby, and purchased two additional mobile milking units. That made it possible for the animal husbandrymen on the Pripyat Sovkhoz within one five-day period to even out and stabilize the milk yields.

"I cannot fail to express a sense of profound gratitude to the management of the Kolkhoz imeni XXII Syezd KPSS and its chairman Vladimir Nikolayevich Khlopok for the efficient, time-responsive approach with which all the questions that arise are being resolved," the director says. "Without any delays, the efforts and material resources of the two collectives are being efficiently united for the resolution of the chief task -- the unconditional fulfillment of the assignments in the first year of the five-year plan."

The mutual understanding and businesslike contact between the two managers in the complicated situation make it possible to set up the entire economic activity smoothly. By helping one another, the two collectives are confidently coping with the strenuous operations in the field and on the animal farm. For example, the Kolkhoz imeni XXII Syezd KPSS, having assumed an additional workload, not only has not reduced the milk yields, but also, from day to day, has been increasing the milk production. At the present time the average daily milk yield per cow here is 10.5 kilograms, which is 3.5 kilograms more than during the same period last year. Grass mowing is at its peak. Working selflessly alongside the kolkhoz mechanizers are their comrades from the Pripyat Sovkhoz. Female kolkhoz members and sovkhov workers are working shoulder to shoulder on the sugar beet fields.

"We are working in a smooth, well-coordinated way," kolkhoz chairman V. N. Khlopok says, entering the discussion. "We were getting a bit crowded in the office, so we organized a general control center, and, in general, we share everything that we can. During the first days we allocated [heating] fuel, and [vehicle] fuels and lubricants. The kolkhoz workshops are also at the complete disposal of the mechanizers from the Pripyat Sovkhoz. More than 160 head of cattle have been placed under their complete charge. It's really impossible to enumerate everything!"

The kolkhoz's summer shed, which accepted the first cows from Pripyat Sovkhoz, today is rebuilt by the efforts of the sovkhov construction brigade. The pens are being fenced in, lean-tos are being erected, and milking, refrigeration, and other equipment is being installed. The sovkhov motor-vehicles garage, machine and tractor pool, filling station, and warehouses are also being jointly used. People's everyday life is also being restored by the joint efforts. Concern for people is today the main thing for the farm managers and party leaders, Ivan Fomich Sachenko from the Pripyat Sovkhoz and Eduard Nikolayevich Grigorovich from the Kolkhoz imeni XXII Syezd KPSS. The providing of three meals a day has been organized, and people are taken by motor buses to work and to the dining hall. Families with many children were warmly welcomed by the local vegetable husbandrymen into their homes, and now they are being offered separate homes that had previously been empty. The homes are being urgently put in order -- ten families have moved into them. Many families have been given rooms in the kolkhoz dormitory.

The weight of worries and concerns for the vegetable husbandrymen of the Pripyat Sovkhoz has begun to ease considerably: they are being carried on the reliable shoulder of the collective at the Kolkhoz imeni XXII Syezd KPSS. And the situation could not be otherwise on the land where people are your brothers!

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CSO: 1800/457

## EVACUATION

### MOSCOW DETAILS ARRANGEMENTS FOR EVACUEES

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[Editorial report] Moscow Domestic Service in Russian at 1130 GMT on 30 May carries a five minute telephone interview with Sergey Vasiliyevich Litvinenko, the chairman of the Board of the Ukrainian Republican Union of Consumers Cooperatives.

Litvinenko says that while the Chernobyl area was being evacuated many shops and the majority of public catering enterprises worked "practically round the clock." Mobile hot meal, grocery, clothing and footwear supply points were organized in addition to the fixed trade enterprises. Around 600 retail trade enterprises and 145 public catering enterprises are currently functioning "efficiently and without interruption" in the relevant rayons. Consumers' cooperative workers are working "with a double and I would even say a treble load" to supply the relevant rayons with "manufactured goods and foodstuffs." He says that despite the fact that in the first 10 days of May the majority of days were off-days, goods were delivered to the areas where the evacuees were housed, round-the-clock.

Litvinenko says that sausages, meat, dairy products, butter and other high-calorie products are arriving in "sufficient" quantities taking account of nutritional norms. Preserved foods, nonalcoholic drinks and juices are also being supplied. The cooperative enterprises of Kiev oblast "have increased their output of foodstuffs." Up to 17,000 people are being given hot meals hourly by public catering organizations. The majority of evacuees are taking advantage of public catering services, while the others are eating in people's homes as there is a "sufficient" quantity of goods in the shops. Catering at the cooperative enterprises is being arranged using the lowest mark-up scale. Milk, kefir, sour cream, cheese, confectionery, juices, fresh cucumbers, tomatoes and vegetables are constantly on sale. Litvinenko continues stating that clothing, footwear and domestic articles have been delivered to the areas where the evacuees are living in "necessary" quantities. "All who so desire" have been "fully" supplied with towels, sheets, blankets, metal folding beds and crockery. The schoolchildren who are leaving for pioneer camps have received linen, sports clothes, jackets, and shoes. Manufactured consumer goods shops are giving people credit without a down-payment. Public catering workers sent in from Zhitomir, Cherkassy and other oblasts, and repairmen, fitters and other specialists, are working selflessly. Litvinenko names individual enterprises which are making a special effort to provide necessary goods for the evacuees.

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CS0: 1800/450

## EVACUATION

### PAPER REPORTS ON POLICING OF EVACUATED VILLAGES IN BELORUSSIYA

PM120914 Minsk SOVETSKAYA BELORUSSIYA in Russian 3 Jun 86 p 1

[Report by correspondent A. Gotovchits under the "On the Spot" rubric: "On Both Sides of the Line"]

[Excerpts] The line, the boundary separating us from the Chernobyl AES 30-km zone, really does exist. Two plowed furrows skirt a wood, alongside which fields stretch out south toward Kiev Oblast and northwest toward Khoyniskiy and Narovlyanskiy Rayons. As in former springs the scent of the sun-warmed pinewood is in the air and the birds sing unconcernedly. A most absurd situation: The danger can be neither seen nor heard, yet the further you go beyond the village of Savichi, deep inside the cordon, the more insidious it becomes.

I was standing at a traffic checkpoint with Militia Captain M. Saponenko, deputy commander for political affairs at the rayon internal affairs department, and we seemed to be thinking about the same thing: There remain within the 130-km-long semicircle 50 villages, the cows and property of thousands of rural dwellers, dozens of farm buildings, houses of culture, consumer service facilities, stores, and communications sections. This must all be protected and safeguarded against any eventuality. No mean task, and one that falls squarely on the shoulders of the internal affairs organs.

Routine but very crucial work began after the population was evacuated: safeguarding public property and evacuees' personal property and ensuring that the evacuated population centers are protected against fire risk. Militia staffers drafted in from Minsk, Vitebsk, Grodno, Brest, and Mogilev arrived in the Polesye region. The republic MVD set up an operational headquarters in Khoyniki to coordinate the groups of reinforcements. It was headed by Major General V. Savichev, its first deputy minister.

The zone adjoining the nuclear power station has been split into sectors and routes. Traffic checkpoints and mobile details have been placed around the zone perimeter. Officers and sergeants are on duty around the clock in successive shifts. They don special clothing, receive radiation monitors and respirators, and then set out for the other side of the line.

Nothing escapes the militia workers' attentive gaze. Neither fresh tracks on a road nor an unlocked door. In the village of Suvidy M. Adamenko and M. Shinkorenko immediately discovered four unlocked houses. They had to be sealed up. The door of a rural club in Pirki, with musical instruments and equipment worth thousands of rubles inside, had been left wide open. Decisive action on the part of militia staffers I. Bagay and V. Kuznetsov from Rechitsy and promptness by firemen prevented a fire in a feed shop in the village of Zalesye.

It was time to return from the zone. I headed for Khoyniki. I held a final interview with First Deputy Minister V. Savichev at the Belorussian MVD headquarters.

"Despite the unusual circumstances," Vladimir Nikolayevich said, "the personnel's morale is high. People and farm leaders may rest assured that everything left inside the zone is being reliably safeguarded."

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CSO: 1800/465



## EVACUATION

### LITHUANIA ACCEPTS PRIPYAT EVACUEES, SENDS HELP

Vilnius SOVETSKAYA LITVA in Russian 5 Jun 86 p 1

[ELTA report: "Surrounded by Concern"]

[Text] People from the regions suffering from the accident at the Chernobyl AES are arriving in Lithuania. A group of the inhabitants of Pripyat has been taken in by the Vilnius Radio Measuring Instruments Plant imeni 60-letije Oktyabrya.

The plant administration has provided work for those arriving, given them money and found places for them in the hostels. All children have been given places in the kindergartens and creches. Food and medical services have been organized at the plant.

Other enterprises in the republic's capital have also given considerable assistance to the victims. Thus, the collective of the Ramune Custom Tailoring Factory has for some days been sewing clothing for all the women arriving, using their own resources. The Leliya Sewn Goods Production Association, the Leather Footwear Plant imeni P. Eydukyavichyus, the Leather and Haberdashery Factory and the Sparta Knitted Hosiery Factory have all offered their output to those arriving: sets of clothing for newborn infants, footwear, knitted articles and suitcases.

The Vilnius party gorkom is paying considerable attention to the people of Pripyat who have been given temporary work at the enterprise.

The first secretary of the Lithuanian Communist Party Central Committee P. Grishkyavichyus accompanied by the first secretary of the Vilnius Gorkom V. Mikuchauskas recently visited the Radio Measuring Instruments Plant imeni 60-letije Oktyabrya.

In the enterprise club comrade P. Grishkyavichyus met with people arriving for temporary work from the region of Pripyat. He described how the collectives in the republic are implementing the decisions of the 27th CPSU Congress, accelerating scientific and technical progress and solving social problems.

The guests familiarized themselves with the labor, everyday affairs and life of the people from Pripyat.

The guests at the plant were accompanied by the enterprise director O. Burdenko.

## EVACUATION

### DIFFICULTIES FACING EVACUEES CITED

PM091435 Moscow SELSKAYA ZHIZN in Russian 6 Jun 86 p 3

[Report by G. Krasnoperov: "How People Have Settled Down in Their New Location"]

[Text] Gomel Oblast--Narovlya is the center of one of the three rayons in the oblast immediately adjoining the Chernobyl AES disaster zone. The town dwellers' life looks ordinary. But there is, however, something not quite right. It is only afterwards that you realize what was unconsciously troubling you: There are no children on the city streets. Later at the party raykom you are told that they sought to protect the children from even the slightest trace of radiation and evacuated mothers and children to spots which were completely safe. According to radiation and medical monitoring figures, the adult inhabitants are not under any threat either. There was a potential threat to the inhabitants of eight villages situated inside the Chernobyl AES zone, but people were evacuated from them immediately after the accident.

The people temporarily evacuated are mainly workers from the "Pripyat" Sovkhoz and their families.

Ivan Fomich Sachenok, party committee secretary of the rayon's largest farm, said: "We have survived the most difficult thing, the evacuation. Imagine moving at one go 1,800 people and almost 7,000 cattle, including privately owned cattle, and pigs...."

Prominently displayed in the summer camp, which was quickly built for Pripyat's two dairy units, was an "Action Report." It read: "The results of the last 5-day period show that the following have particularly distinguished themselves: Mariya Sidornenko, Marta Yetsner, Marta Rode, Polina Klizhevskaya, Pavel Yetsner, and Leopold Rode."

Many pacesetters at the "Khatki" farm have the same surname, and at the neighboring "Khutor Les" farm entire families are working. Ivan Dmitryevich Serzhan is a team leader and his wife, Mariya, and nieces Antonina and Valentina are milkmaids. His son, Yuriy, is a machine operator and he is currently engaged in transporting feed.

Specialists are being instructed at the kolkhoz office, where Yevgeniy Petrovich Vysotskiy, director of the "Pripyat" Sovkhoz, has temporarily set up his own office. The sole task is to do the utmost to limit damage to the sovkhoz. The oblast has given help to the affected farm: It decided to send several hundred of the sovkhoz' bullocks to neighboring rayon complexes for final fattening.

"That is what the state requires," Yevgeniy Petrovich said. "The farms where our livestock are now located do not have enough hay or pasture for the increased numbers. The animals will put on a lot of weight on the specialist complexes. However, we still have thousands of cows and just as many young animals. We have been allocated hay and concentrates from oblast stocks. The animals are under constant veterinary supervisions."

Not for nothing is it said that there is no place like home. And here the milkmaids, herdsmen, and machine operators from "Pripyat" ask the same question: "When are we going home, then?" The director and party committee secretary have already repeatedly explained that "Unfortunately, no one can give a precise time for our return. Work is underway to decontaminate the territory and buildings within the Chernobyl AES 30-kilometer zone."

I learned from Grigory Ivanovich Potachits, chief of the Gomel Party Obkom Agriculture and Food Industry Section, that even in the winter the livestock belonging to the temporarily resettled kolkhozes and sovkhozes of Braginskiy, Kyonikskiy, and Narovlyanskiy Rayons will not go without feed. Among other things, the oblast's industrial enterprise collectives have been set the target of procuring 14,000 metric tons of hay for those collectives. Hayfields will also be allocated to the evacuees.

The concern of the "Pripyat" Sovkhoz leaders to equip the livestock units, for example, with mobile shower units, which are so needed by people now, is understandable. M.Ya. Tsukerman, a leading rayon agroindustrial association specialist, and M.P. Kalyada, deputy chairman of the oblast agroindustrial committee, have been brought in to deal with this matter. But they have not been able to solve the problem straightoff. Another problem is that the "Pripyat" Sovkhoz is located on seven farms and the management lacks both radio communications and personal transport. How is it possible to run a farm without such facilities?

There is no gainsaying the situation is difficult. Given that, the decisions must be particularly well considered and precise.

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CSO: 1800/447

## EVACUATION

### FURTHER DISCUSSION OF EVACUEES' PROBLEMS

PM161321 Moscow IZVESTIYA in Russian 13 Jun 86 Morning Edition p 3

[Report by special correspondents Nikolay Baklanov and Andrey Illesh: "The Ispolkom's Tricky Concerns"]

[Text] Kiev Oblast--The three-story Borodyanskiy Rayispolkom building with a flag on the roof can be recognized a long way off. Only on going closer do you notice signs of the present complex situation: Another signboard has been fixed to the brick wall next to the usual one--it is the signboard of Chernobylskiy Rayispolkom.

There are a lot of people in the rooms allocated to it. The line of people indicates better than the freshly painted signs where the leadership is seated. People are on chairs outside offices, crowding in the waiting room.... Things in this building have been anything but quiet and unhurried for more than a month now. And people have been working at the ispolkom for more than a month with no regard for accepted office hours.

Rayispolkom Deputy Chairman V. Stepanov (the chairman has remained in Chernobyl--there are plenty of urgent matters there too) is a tall, middle-aged man. He has a charming and unexpected smile. And this is of considerable importance, as, in fact, confirmed at the reception for citizens which we attended. Why do evacuees come to their old-new ispolkom?

A thin, vigorous old woman entered the austere furnished office. Stepanov invited her to sit down.

"Praskovya Nesterovna Pashtyka. Pensioner. My son and I have to go and get some warm things," she addressed Stepanov. "From Chernobyl..."

"Yes, of course....," the deputy chairman said, although it was not at all clear to us what he would go on to say. Chernobyl is in the zone....

During the conversation he inquired whether the caller had any relatives who could go to the rayon center (entry to the 30-km zone is permitted only with passes) and what things she needed. In the end he made the decision to include the pensioner on the list of people who will set out on one of the special trips to Chernobyl.

"Such requests are now being put to us quite frequently," Viktor Grigoryevich said as soon as there was an "interval" between visitors. "Of course, when people moved out, they frequently forgot essential things in their haste. All the evacuees thought at the time that they were leaving home for a short time. But no one will venture now to predict when they will be able to return home. This means they must get thoroughly settled down in the new places. And settling down means building."

We first heard talk of capital construction at Kiev party obkom back at the very beginning of May. This was unusual, let us admit. The words of Obkom First Secretary G. Revenko struck something of a discord with everything else: "We must think about how the evacuees will feel in the fall. And so we must earnestly tackle questions of capital construction."

What construction? During those May days party, soviet, and economic organs were faced with dozens of, at first glance, far more important problems. The evacuation of people from the 30-km zone was still in full swing. The chief thing was to accommodate them, feed them, and find them work. And the evacuees themselves, taken from their homes, could not imagine how complex and lengthy the seemingly short route, on the whole, from Chernobylskiy Rayon to neighboring ones--Ivankovskiy, Makarovskiy, Poleskiy, Borodyanskiy...--would prove to be. They were escaping from misfortune in the hope of a speedy return.

We heard a second earnest and concerned dialogue about construction a few days later in Makarovskiy Rayon. It was conducted by Raykom First Secretary V. Kostroma and Rayispolkom Chairman I. Kozhukhovskiy. True, the questions there were more down-to-earth--they were discussing specific sites for new construction, panelboard houses, and so forth.

Nearby, in the square in front of the building where we were sitting, in front of the headquarters where the secretary and the rayispolkom chairman were solving the evacuees' problems as they arose minute by minute, buses were pulling up one after another, and more and more new evacuees were alighting into the burning sun.... They were inundated with urgent business, but even so concern about the future did not take a back seat.

And now it is here--the future. Real and visible. The time has come to get down to ordinary living--businesslike and measured. But this transition too demands no less effort from the ispolkom workers than the first days after the accident.

The next caller entered the room--N. Melnichenko, a kindergarten teacher. She had a personal matter--she wanted to legalize conjugal relations with V. Makukha, a boiler plant operator. It turned out that they had been living together in a recently acquired house. They kept house together but had not had time to register their marriage. When the evacuation came, they stayed with friends. They wanted to return but, of course, were not let into the zone. They were left without documents.... How was the marriage now to be registered?



"We will help," Stepanov nodded. "Go to the rayon public education department--to your immediate chiefs--and say the rayispoklom deputy chairman sent you. You are to be included in a group which will soon travel to the zone." And, after a moment's silence, he asked: "All the same, if it is not a secret, why have you decided to register your marriage right now?"

"To avoid domestic arguments," the young woman shrugged her shoulders. "At first my husband was sent to work in one village, while I was sent to another. Now we are together, but.... Generally speaking, what we have experienced has enabled us to evaluate each other better. We have seen for ourselves how misfortune tests people. Probably it has tested us too..."

Yes, the Chernobyl events have been an amazing, sometimes tough and even terrible test. A test of staunchness and courage, kindness and responsiveness. A test simply of humaneness.

...Diverse people come to Chernobylskiy Rayispolkom. There was a large, not very elderly woman who hurled her passport onto the table and demanded payment of a pension. Stepanov picked up the document and ascertained that the caller had already received the R200 allowance. She now wanted to be paid a pension too, even though she was not entitled to it.

"Let us see your work record, how long you worked on the farm," Viktor Grigoryevich said, restraining himself. He added: "You see, the law is the same for everyone. And if you have not merited a pension, you will have to work. And we will find things for everyone to do now..."

Watching the petitioner go, he motioned toward her:

"Unfortunately, some people, trying to speculate on misfortune, try to solve personal matters unlawfully and to gain additional benefits."

Of course, there are such people. You must not think that the accident has brought to light just the best human qualities and revealed just order and cohesion. As in all life, there is everything in life affected by the accident--both courage and baseness. Far less of the latter, fortunately. People have really rallied together and endure difficulties with dignity. But the task consists in making these selfsame difficulties as brief as possible and helping everyone in everything.

Borodyanskiy Rayispolkom Chairman P. Moskalenko said:

"The rayon has accepted a large number of evacuees. During the first 3 days alone we welcomed more than 19,000 people and approximately 17,000 head of livestock. We worked round the clock: Everyone had to be washed and fed, and many had to be issued with clothes and given rest accommodation.... It so happened that livestock came from farms before those who were to look after them. So local residents milked cows and set about looking after the animals themselves."

Many facts from the rayispolkom chairman's account were familiar to us: the requests from hospitable hosts to put up evacuees and their truly attentive attitude to the newly arrived livestock—we had encountered all this in other rayons from which we sent reports to IZVESTIYA during the first days after the accident. But then two people carrying sheets of drawing paper looked into Moskalenko's office.

It turned out that the newcomers were specialists from Kharkov who had brought for agreement a plan for the construction of the settlement of Zhovtnevy, in which evacuees will live. What will be erected there first of all? A store, a dining room, a bathhouse, a school, a children's combine....

"Housing construction is also of great psychological significance today. On seeing construction sites people feel far more confident, see their prospects, and know the 'outlines' of their future," the rayispolkom chairman said. "For, you will agree, it is hard to be a hospitable host for 'an indefinitely long time.' Whereas at the first stage it was largely people themselves who were concerned with accommodating the evacuees, the state is now tackling this very complex issue. In our rayon alone 1,190 small houses and social, cultural, and consumer projects will be constructed for families who have left their homes. The newcomers will be given allotments for truck gardens, and piglets and steers for plots....

"I expect you are interested in the schedule for constructing settlements? It is as tight as possible," P. Moskalenko continued. "Many projects are to be fully ready by the fall. Kievgorstroy, Kharkovagrostroy, and Krymagrostroy specialists will work with us. We pin great hopes on them. We for our part will do everything possible to ensure that those who have come to us feel really at home as quickly as possible."

One of the rayon leaders shared an unexpected observation with us. He could not get this story out of his head (even in that hurly-burly). Briefly, its essence is as follows: As you know, the evacuees brought livestock with them. Not just kolkhoz livestock but their own, personal livestock. At first it was accommodated anyhow. Then one morning he—a rayispolkom worker—saw an elderly woman with a milk pail. She was confused and in tears. What was the matter? She had come to milk her cow, but it seemed that it was no longer hers—it was a kolkhoz cow. He explained: "Ma, the state will give you money for the cow. They have taken it over because you no longer live at home with your family. How could you provide a cow with a stall and feed here? You will torment both yourself and the animal that way..." But she was having none of it [Ta—ni v kakuyu].

He did not tell us this in condemnation of the elderly peasant woman. He tried to explain: Accident or no accident, habits and routine go on as usual. And, as far as possible, it is not worth mixing them up.

A simple story--a stroke, as it were, a trifle in the great hurly-burly of resettlement: Tens of thousands of people have been moved! But it really upset the rayispolkom worker. And if a specific old woman and her problems occupy the rayon leadership so greatly, life will fail--and is already falling--into the necessary ordered pattern. And the decision to begin building right now--at the beginning of summer--so that this old woman does not get more serious problems by the fall (not that the business of the cow is a joking matter), struck us on our tour of the rayon as perhaps the most important thing we saw.

...Outside it is summer. And peasant concerns bring the evacuees out of their hosts' houses into the fields and livestock units for the whole day. Only toward nightfall do they return to their temporary homes. But there is not much room there at all.... Both the guests and their hosts must lead their own life. They have common cares, and their life is normal.

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CSO: 1800/494

## EVACUATION

### PAPER REPORTS ON AREA RELIEF MEASURES

PM171425 Moscow IZVESTIYA in Russian 15 Jun 86 Morning Edition p 3

[Own correspondent N. Matukovskiy report "From Rayons of Belorussia Adjacent to the Chernobyl AES Zone": "Nothing Is Unimportant Here"]

[Text] Gomel Oblast--Long before reaching Bragin, we saw signs on both sides of the highway with the inscription: "It is forbidden to get out of your vehicle." This is not an unnecessary precaution. Because it is here, in the thick grass on the roadside, that radiation, washed from the road by rain and sprinkler machines, is concealed. We overtook the seemingly endless stream of vehicles transporting concrete frameworks, asphalt, slabs, beams, and bricks, pulled into the slow lane, and let the livestock carriers and dump trucks carrying soil, bushes, and trees go through.

There are hundreds of dump trucks, scrapers, bulldozers, asphalt layers, and excavators on the streets of Bragin today. There is not a single casual spectator watching this unprecedented assembly of equipment. Thousands of men and women (the children were evacuated long ago) together with army subunits are waging the struggle for the city.

No, the radiation level is not a danger to life. But it is not safe enough to allow people to live here for months, even years, yet. So the question arose: What is to be done with the urban settlement, housing around 7,000 residents? Evacuate it? But it is not all that easy to relocate those 7,000 people in areas which have already taken in more than 30,000 evacuees from the 30 km zone. After long consultations with scientists, doctors, and military specialists, it was decided to decontaminate the town without removing the people. An unexpected and bold decision.

"This is above all very complex and labor-intensive work," Rayispolkom Chairman A.M. Prokopov said tiredly. "We would not have been able to cope alone, without the military. We had to carefully hose down 1,220 houses, hundreds of barns, garages, and depots, and tens of thousands of trees. We must not allow it to reach the roots and leave Bragin treeless."

Immediately a host of problems arose which had to be resolved immediately, without delay. Where and how can you "store" a 5-10 cm layer of soil removed from the town's streets along with bushes? In bushes and in the debris in general, the radiation level is several times higher than on flat ground. How can you protect water sources? What do you do with dilapidated houses that are hardly even standing: Do you decontaminate them or pull them down? How about roof tiles on which moss, not susceptible to hosing down, has grown?

In the next room, there was an extraordinary meeting of construction workers chaired by A.I. Bezlyudov, the republic's minister of housing and municipal services.

"The greatest problem of all is water! Decontamination means that we need a very great deal. Two wells were immediately sunk and linked to the town's main water supply. Second: Every measure had to be taken to ensure that the radiation 'washed' from the town did not reach the water table along with surface runoff water. All 169 wells have been purified (there are almost 13,000 in the affected zone as whole). They have been sealed off. Third: The main source of dangerous radiation is ordinary dust. We are urgently trying to get rid of it, and for that reason are asphaltting all the town's streets, sidewalks, squares, public gardens, and areas around schools and kindergartens.

"All the republic's oblasts have sent essential equipment and people. Asphalt is constantly arriving from Gomel and Mozyr. Just a few more days and the town will be clean and new..."

It was here that I met four more leaders of republic ministries and briefly interviewed them.

A.L. Grib, minister of consumer services, said:

"We immediately sent all our resources into the affected area. Bathhouses are now hurriedly being built on farms, and we are building four major comprehensive combines--in Bragin, Lhoyniki, Narovlya, and Rechitsa. In time, the in-patient decontamination center will become a large bath and laundry combine."

N.A. Makayed, trade minister, said:

"We urgently reviewed our stocks and sent the goods intended for other oblasts here instead, to the affected rayons. Above all we sent food. For a time we even sent unskimmed milk, sour cream, and cottage cheese here from Grodno and Vitebsk Oblasts. V.I. Chigir and I have now visited three rayons and seen for ourselves that all the essential goods are available in the stores."



V.I. Chigir, chairman of the board of the Belorussian cooperative union, said:

"Yes, the goods are there, but our workers on the spot showed inexcusable haste and carelessness. Tens of thousands of people were taken from their homes all at once. They had to be provided immediately with food, mineral water, fruit juice, bedding, and linen. This was not carried out promptly in all places. For that reason, A. Shabanov, chairman of the oblast Potrebsoyuz [Consumers Union], and A. Oliyarnik, his first deputy, have been dismissed, and two other deputies have been severely reprimanded. They failed the test posed by the complex situation.

"The situation was complicated still further by the fact that the children were evacuated with their young mothers--the cooks, waitresses, salesgirls, and buyers [tovaroved]. Now we have brought in people from other oblasts. In some places, people have switched to a tour-of-duty method [vakhtovoy metod] of providing services."

The most thorough interview was given by V.A. Kozlov, chairman of the Belorussian SSR State Committee for the Protection of Nature:

"The second stage of the struggle has begun and perhaps will be even more complex than the first. The main problem is to protect foodstuffs and water from contamination. That is not easy, particularly when it comes to water. Nevertheless, some radioactive 'particles' did fall on bodies of water, neighboring peat bogs, and forests. It must now be decided how to clear them away. For example, the peat bogs received considerably more radiation than ordinary soil. But we have already ascertained that when peat bogs are turned over, the radiation level falls by a factor of four-five, when they are cleared of bushes, it falls by a factor of seven-eight, and when they are irrigated and limed it falls by a factor of one and one-half. Our recommendations have been passed on to all farms."

The problem of runoff water resulting from heavy downpours must be tackled. In heavy rain, water may run from the fields into bodies of water. It is necessary to give immediate thought to spring floods and as quickly as possible examine river bed deposits, where radiation tends to accumulate. Finally, how are we to irrigate the land, 'bury' the radioactive debris, and stockpile ordinary cow manure, which contains a higher level of radiation than the environment--soil, water, and air?

"It is the first time that we have encountered these problems and there was much that we did not know. We have to find solutions as we go along. In matters like this, nothing is unimportant. Anything left unconsidered or underestimated can be disastrous..."

"People must be told the truth, as it really is. For example, the evacuees must be told honestly and openly that many of them will not return to their homes for a long time. We must begin preparing right now to provide thousands of people with normal housing before the cold weather sets in, before winter. That is the main thing now."

On returning to Gomel I talked with A.A. Grakhovskiy, chairman of the oblispolkom, who with G.S. Tarazevich, chairman of the Belorussian SSR Supreme Soviet Presidium, and M.V. Kovalev, chairman of the republic's Council of Ministers, had just been touring the affected rayons in the oblast.

"We did not just tell people," Aleksandr Adamovich said, "we asked them where they would prefer to live—to remain on a farm in their own rayon, to go to another rayon in the oblast where helping hands are needed, or to go to relatives? The overwhelming majority wanted to stay in their own rayon. You can understand how people think: It may not be home [khata], but it is close to it."

"Home [khata] to the peasant is not the same as home [kvartira] to the city dweller, Aleksandr Adamovich."

"We have taken that into account, too—we are not simply going to build dwellings [khata] but the most modern farmstead-type homes [kottedzh] with the full range of farm facilities. We have also taken into account the fact that during the evacuation people suffered materially and mentally [moralno]. It was a place to live but it was not home [khata]! That is why we decided to build new homes that were better than the old ones."

"After long consultations and conversations with people we decided to build new villages containing at least 50 homesteads—a large settlement for Belorussia. And the enlarged villages also mean new schools, kindergartens, stores, consumer centers, bathhouses, and paramedical and obstetric centers. Almost 1,000 km of roads alone must be asphalted. Once we have given people homes we must take care to provide work for them, that is, to expand production."

"And all of this in 3 months," I said doubtfully. "It is hard to believe that this is possible, you will agree."

"That deadline has been set by the republic's government and we cannot exceed it. We have been given all the necessary resources and construction materials. But manpower... In the main we will manage by ourselves but some of our construction will be done by other oblasts in the republic. No one objected or mentioned their own needs. Everyone is well aware that our misfortune is common to all."

"As I understand it, Aleksandr Adamovich, all the concerns that you have just described are 'above-plan.' What about planned construction work?"

"It will be fulfilled unconditionally but with much hard work."

The following question occurs to me: which people, which organ will lead this... 'above-plan work'? After all, it will not be easy."

"I understand... We immediately and flatly rejected the creation of special 'staffs' or 'commissions.' Why transfer our responsibility to someone else? In normal times Soviet power bears full responsibility for people's

lives. It must bear it at critical moments, too. By that I mean the oblispolkom within the oblast, rayispolkoms within the rayon. We, at the oblispolkom, have administrations and departments each responsible for their own long established and customary spheres. Why should we create new ones of the same kind? People have put their trust in us, and that trust must be justified come what may."

I forgot to mention that during my first visit to the Gomel region I did not find A.A. Grakhovskiy in Khoyniki (Khoyniki is the permanent site of the republic government's operations group, headed by A.A. Petrov, deputy chairman of the Council of Ministers). Aleksandr Adamovich had been taken away, suffering from critically high blood pressure. Now I thought it tactless to ask about his health.

It would seem possible to put the final reassuring full stop here. Everhthing, or virtually everything possible in this situation has been done for people driven from their homes by misfortune. People met that misfortune with dignity and courage.

"They are wonderful people!" Obkom First Secretary A.S. Kamay said.

In that case what prevents me putting the "reassuring" full stop? Yes, the Chernobyl AES accident was a severe test for us all not only of our morale and spiritual strength but also of ordinary organization, order, discipline, and finally common sense. Some people did not pass the test when it came to these latter qualities. Take A. Shabanov and A. Oliyarnik, who have already been dismissed. They just had to provide the evacuees with the necessities. They lacked the simple sense of personal responsibility, organization, and fortitude.

Victors are not judged, as the saying goes (although it is still such a long way to the final victory). But how can they not be judged? Returning from Bragin to Khoyniki we saw a herd of cows grazing alongside the signs bearing the inscription "It is forbidden to get out of your vehicle" and elsewhere a group of people, about 12 of them, nonchalantly mowing the grass. But that is where the increased radiation is! How can this be? On the one hand we are putting radiation meters into virtually every jug of water and on the other we are allowing cattle to graze and are cutting grass in the very places where it /must not/ [capitalized words between slantlines printed in boldface] be cut!

Yes, panic is a terrible foe, of course, and is to be avoided. But nonchalance, over-confidence, and bluster of the "we don't give a damn" kind are no better. Do some people have their wits about them still? Or have their wits already become dulled?

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CSO: 1800/465

## EVACUATION

### WATER SHORTAGE IN GOMEL OBLAST REPORTED

Moscow SOVETSKAYA TORGOVLYA in Russian 19 Jun 86 p 4

[Article by SOVETSKAYA TORGOVLYA special correspondent M. Lysov, Gomel Oblast: "There Is No Concern Today That Is More Important..."]

[Text] In the rayons of Gomel Oblast which are adjacent to the zone of the Chernobyl nuclear-power plant, operations to eliminate the consequences of the accident are proceeding at full speed.

The discussion with the chief of the Gomel Oblast Trade Administration, Petr Aleksandrovich Myslivets, is constantly interrupted by the telephone ringing. According to the speed with which decisions are made, one also feels that the accident is still making itself known, but everything has been brought in to fight it. In the intervals between telephone calls, our conversation continues.

"The situation is gradually returning to normal," Petr Aleksandrovich says. "It does not compare in any way with the situation during the first hours and days after the accident at the fourth unit at the nuclear power plant, although, of course, we still have a large number of problems ahead of us. Feeding people who have been evacuated from their familiar surroundings and providing them with water and everything else that they need is a complicated and urgent job. We have more than enough difficulties. What is the thing that concerns us most today? The shortage of bottled water and all kinds of soft drinks." We might mention that, in talking with P. A. Myslivets, we also touched upon a topic that gives no rest to the man in the street -- the question of whether it is true that, in the rayons that have suffered from the accident, alcohol is flowing like river, since it is supposed to possess various therapeutic properties. The administration chief stated authoritatively that statements such as these are complete fabrications that have absolutely no foundation. The statistical data for Gomel Oblast convincingly attests to the fact that there has been no increase in alcohol consumption recently. On the contrary, there has been a steady process of reduction in the sale of wine and vodka products.

"That is our firm course and we have no intention of deviating from it," P. A. Myslivets said. "It is a different situation with bottled water and soft



drinks. In the rayons that have taken in the evacuated population, there is a shortage of them. In addition, it has been very hot, as you can see. Therefore we certainly wouldn't refuse help..."

One is assured that help will be arriving soon. Chernobyl's misfortune has become everyone's misfortune. It has thrown, as it were, new light upon our best features, our Soviet features: mutual assistance, mutual aid, and participation in the entire country's fate.

Time here has taken on a different dimension: sometimes one has difficulty believing how much can be done if one engages seriously in it, if one takes the shortest path to the goal.

The trade administration has received the assignment to open up seven dining halls in the villages to which the people had been evacuated from the 30-kilometer zone. The deadline for doing so was extremely short: 10 days from the receipt of the assignment to the beginning of the services for the first visitors.

"When we get orders like that, we don't discuss them," P. A. Myslivets says. "The construction groups in the trade organizations joined in the work and provided them with equipment, materials, and tools. No one has to be exhorted to work harder -- the work is in progress as long as there is sunlight. The first dining hall in the village of Kharkovich is already almost ready to go, and we will turn over the other ones on time or a little bit earlier..."

We might note that the dining halls in question are not some kind of temporary structures, but, rather, are capital structures that are designed for operation year-round. Electrical transmission lines are being brought up to them, self-contained sources of water supply are being set up, and plumbing is being installed. A basement for storing a supply of food products is being built at every dining hall, and warehouses are being built.

While giving proper credit to the bravery and enterprise of the economic managers who have been working with the full straining of their efforts to eliminate the consequences of the accident, we must say that in this complicated situation there have been some who have proved not to be operating at peak efficiency. For example, recently the chairman of the board of governors of the Gomel Oblast Union of Consumer Cooperatives, A. Shabanov, and his first deputy, A. Oliyarnik, were relieved of their duties, and two other deputies were given a strict warning. They had failed to shift the forces and means properly in the situation that had been created.

I may as well admit that I often heard perplexed questions to the effect that, since those people had been rather good workers and had no bad marks against them, why had it been necessary to deal so harshly with them? It would probably be incorrect not to mention this and not to give an explanation: that which yesterday, under ordinary conditions, might have been sufficient in the work of the administrators at such a high level has proved today, under emergency conditions, to be far from enough. It was necessary, as quickly as



possible, to make a break with many obsolete views and ideas. The calamity did not leave anyone any time for reorganization.

Life in Gomel -- one of the prettiest modern cities in Belorussia -- has returned to normal. The streets are full of people, and people are basking in the sun and swimming at the city beach on the bank of the Sozh. Everyone is in fine fettle and healthy, despite the rumors that are being spread repeatedly by various enemy "voices."

Gomel's Central Kolkhoz Market is functioning. Its director, Nikolay Adamovich Karpenko, has estimated that as many as 30,000 residents of Gomel visit it every day. True, the assortment of vitamin products shipped in from the surrounding villages is, for the time being, somewhat narrower than in previous years, but from day to day the amount of trade has been increasing. At the present time, strawberries are in season and the berry stalls have a delightful abundance.

"What steps are being taken to guarantee the absolute purity of the agricultural produce arriving at the market?", we ask the director.

"It is a 100-percent guarantee. All the produce shipped to the market undergoes special -- and I might note, very rigid -- control. The sanitation service has been provided with Geiger counters, and not a single berry can get into the berry stall without being checked. We have regrouped our efforts and we have more than doubled the number of controllers at the trade stalls, by reducing the other market services. The people of Gomel know about this, and they come to the market without any fear. With every passing day there has been an increase in the flow of produce. By way of an example, I might mention the price of those strawberries. During the first days after they began appearing in the market, the price was 10 rubles per kilogram. But today the price has fallen to 1.5-2 rubles."

That evening we met the secretary of the party's oblast committee, Nikolay Grigoryevich Voytenkov. He had just returned from a brief business trip: he had taken a helicopter flight around the rayons in the oblast to which the people who had been evacuated from the danger zone had been resettled.

"The work of eliminating the consequences of the accident is being extended more and more broadly on the territory of Gomel Oblast," he said. "There is today no concern more important than providing the people with reliable housing and food, accelerating the rates of decontamination of the affected locality, and, in the favorable rayons, the carrying out of all the agricultural operations in a planned, efficient manner."

Life is continuing and is returning to its normal track. The workers in trade and in public nutrition are making their noticeable contribution to the process of bringing life back to normal.

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CSO: 1800/489

## CLEANUP MOBILIZATION

### INITIAL CLEANUP WORK DESCRIBED

LD161507 Moscow TASS International Service in Russian 1356 GMT 16 May 86

[Text] Moscow, 16 May (TASS)--The situation at the Chernobyl AES and in the adjacent area is being monitored fully. Efforts to eliminate the after-effects of the accident are increasing. Specialists from many cities in the Ukraine and other Soviet republics are helping in this. Soviet newspapers write today about the progress of work at Chernobyl.

"The party organization at our atomic electrical power station can be proud of its communists. Everyone has done and is doing everything within their power and capabilities"--these words by S. Parshin, secretary of the party committee at the AES, are quoted today in PRAVDA newspaper.

"For fulfillment of a task of particular importance I ask to be accepted as a candidate member of the CPSU. I want to carry out my official duties together with communists on the front line...." This and tens of other such declarations have been written by the Chernobyl AES. Physicists and technologists, servicemen and firefighters, scientists and airmen have asked to be accepted in the ranks of the party. And communists are always, even during such an accident, on the front line, writes PRAVDA.

IZVESTIYA publishes a report from the site where accident repair work is being carried out. There, like everywhere in the zone around the station, there is strict observance of the measures of radiation safety. The invisible radiation does not cover the entire area. It has corroded the earth as if in pockmarks. Therefore, drivers of vehicles traveling there have to maneuver.

Work is in progress from the side of the third power plant. The defensive cushion is growing under the reactor which suffered the accident. In direct proximity to it a foundation pit has been dug, in which drilling work is being carried out. The work is being strictly regulated by doctors and instruments.

In the area of the atomic power station radiation monitoring experts are at work. Measurements are being taken above the reactors from helicopters. In the area of the station and around it there are over 1,300 doctors, nurses, laboratory workers, radiation monitoring experts, and 240 ambulances.

Regular monitoring of the radiation situation is being carried out by the Nuclear Research Institute of the Ukrainian Academy of Sciences. For this, a special monitoring and measurement complex has been set up, reported Boris Paton, president of the academy, to TASS correspondents. In the first place the monitoring and measurement complex gave help to enterprises in monitoring radiation levels in milk and dairy products. Special attention was paid to the water supply of Kiev and a number of villages in the oblast. A considerable contribution was made to this work by geologists, geochemists, physicists, and biologists.

In parallel, questions of creating artificial geochemical barriers on the river Pripyat are being solved. A great deal of work lies ahead in restoring radiation-polluted agricultural lands. This is mechanical working, deciding [obosnovaniye] on the use of existing varieties and bringing out new varieties of plants which have properties of neutralizing harmful elements in the soil. To eliminate the consequences of the accident powerful forces of the entire country have been mobilized--it is the Soviet character which has been clearly displayed in this testing time.

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CSO: 1800/447

## CLEANUP MOBILIZATION

### KAZAKHSTAN EXTENDS ASSISTANCE

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 15 May 86 p 2

[G.Zhdanov report: "Kazakhstan for the People of Chernobyl"]

[Text] Soviet people learned with heavy hearts of the events at the Chernobyl AES. They are now attentively following how events are developing and have perceived with all their hearts and souls and with a sense of relief that the situation in the emergency zone is stabilizing for the better. The entire country is energetically offering assistance to liquidate the consequences of the accident in the fourth power unit of the AES. The people of Kazakhstan are also participating actively in this national matter.

The republic deputy minister of nonferrous metallurgy, Sergey Mikhaylovich Fabrichnov, has reported to the editorial office that a whole series of enterprises in the sector are now engaged in meeting urgent orders from the Ukrainians to deliver output needed for repair and restoration work in the zone of the Chernobyl AES. They include the Chimkent Lead Plant and the Achisay Polymetals Combine. Yesterday the KAZAKHSTANSKAYA PRAVDA editorial office spoke with these enterprises by telephone. This is what they said:

K. Izbaksanov, director of the Chimkent Lead Plant:

In short order, already in the first days of May, we sent a batch of lead sheet worth hundreds of thousands of rubles to the Ukraine. A new order came in. One-fourth of it was made by the plant in only 2 days. We think that we shall complete the order in full by 25 May. Without going into the technical details, let me say merely that the rates at which the first one-third of the order was met exceeded the normal rhythm of operations. I would like to note in particular the collective in the rolling section of the improving shop [rafinirovochnyy tsekh], and within that section the shift led by foreman G. Gamanovich. The brigade of rolling workers led by Zh. Amirov was distinguished by high productivity and good-quality work. Rolling shop workers Ye. Tushenbayev and Zh. Kazangapov, electrician V. Logvinov and fitter P. Korotin and many others are showing themselves to be models of individual labor and discipline.

It has been with a sense of great responsibility that the Ukrainian order for the delivery of rolled lead was accepted in all the other economic

subdivisions of the enterprise. Literally everyone is working in an outstanding manner. It can be no other way: the pain of the people of Chernobyl is our pain. On behalf of the combine collective I can say that our metallurgists and rolling shop workers are doing everything they must in rendering the necessary assistance and meeting the order ahead of schedule.

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S. Maulenkulov, director of the Achisay Polymetals Combine:

Tomorrow, 15 May, we shall dispatch from Kentau to the Ukrainian 40 of the best tunnelers from our combine mine-tunneling administration, and also from the Zolotoshakhprokhodka Trust. These truly are the best of the best representatives of their business. For example, they include most of the cost-accounting brigade of tunnelers led by D. Payziyev, which is well-known within the sector in the country. The brigade leader himself and the rest of the brigade will be going a little later. Yesterday we held a meeting at which foremen A. Kokentayev and Yu. Stepanenko (they have been assigned as the leaders of the sectors during the upcoming work) assured us that the Kazakhstan people will do everything to help the people of Chernobyl in the way producing the best results. And I must add one thing. There were many more volunteers than required for immediate dispatch to the Ukraine to help. Many more. We are extraordinarily proud of this display of the best features of the character of Soviet people.

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By plane and by rail people and output are being dispatched urgently to the Ukraine. Yes, the pain of the people of Chernobyl is our pain.

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CSO: 1800/483



## CLEANUP MOBILIZATION

### USSR CITES RUSH TO SEND CRITICAL CARGO

Kiev PRAVDA UKRAINY in Russian 17 May 86 p 3

[Article by PRAVDA UKRAINY correspondents V. Lukyanenko and S. Ryabov:  
"Destination Chernobyl: The Entire Country is Helping to Mop Up the Aftermath  
of the Chernobyl AES Accident"]

[Text] A "green wave" [i.e., arrangement for hitting all green lights] was opened for these reserved trains and special motor columns. A "blue wave" was opened for airliners. If we plot the routes on a map, the grid of lines will take in practically all republics of the Soviet Union and will meet in a small circle denoting the Ukrainian rayon center of Chernobyl.

The work of mopping up the accident at the fourth power unit of the AES [Atomic Electric Power Station] is unfolding ever wider, and this demands not only human efforts, but also special materials equipment and instruments. The staff for mopping up the aftermath of the accident has been refused nothing. As P. I. Mostovoy, chairman of Gossnab UkSSR, said, problems are resolved instantaneously and conclusively.

In this efficiency and extreme concentration of efforts lies the lively response of thousands of people at different ends of the country who have put their shoulders to the difficult work now going on at the AES.

Our correspondents V. Lukyanenko and S. Ryabov contacted republics and oblasts from which freight is being shipped with what is now the most effective "password": "To the Chernobyl AES."

Leningrad. Ten spot welding machines recently were shipped from here to the Chernobyl AES.

"It wasn't easy for our collective to fulfill this above-plan assignment of the government commission," says K. M. Negoduyko, director of the Elektrik State

Union Plant imeni N. M. Shvernik, "but we understood full well that our machines were expected there. The Leningrad workers didn't let them down. Special brigades were set up at the plant and their members decided to work during their time off. N. I. Velichenkov's brigade worked well.

"Please pass on to everyone who now is mopping up the aftermath of the accident that we of Leningrad as well as all Soviet citizens admire their courage and are ready to perform any assignment."

The welding equipment will be delivered to the Chernobyl AES as quickly as possible. The Leningradites are hastening to help.

Yaroslavl. "The Yaroslavlavtotrans Association received an assignment to deliver paint and varnish items necessary for repair and reconstruction work," says L. V. Yakovlev, chief of the press sector of the party's Yaroslavl Obkom. "We prepared the transport in literally four hours and the chemists made up the load. Drivers didn't have to be appointed. Twenty-nine persons volunteered to set off for the Ukraine. The column was headed by Komsomol member Igor Kshukin from the ATP [Motor Transport Enterprise] of Intercity Transport. The lads drove, forgetting about rest, and arrived at the destination a day ahead of schedule."

At this time a second motor column with urgent freight already was en route. Of course, it would have been better had this need not occurred, but since trouble came the Yaroslavl people responded to it worthily.

Kishinev. The editorial office of the newspaper SOVETSKAYA MOLDAVIYA is on the line. I. F. Mikhaylyuk relates:

"The order from the staff for mopping up the aftermath of the accident arrived in Gossnab Moldavia right during the holidays. Nevertheless the people to ship freight from the warehouses were found at once. The 325 submersible pumps and 30,000 pairs of cotton overalls immediately went by trailer-truck to the Chernobyl AES. All this was to be shipped to the Ukraine during the year. Reserves had to be mobilized and the shipments speeded up. The people had no superfluous questions. To the contrary, the main question being asked at party meetings and in worker collectives is 'How else can we help the Chernobyl people?'"

Alma-Ata. G. Zhdanov, chief of the industrial department of the newspaper KAZAKHSTANSKAYA PRAVDA, transmits:

"As announced by the republic Minister of Nonferrous Metallurgy S. M. Fabrichnov, a large number of sector enterprises are engaged in filling urgent orders for the Ukrainian friends. Among them are the Chimkent Lead Plant, Ust-Kamenogorsk Lead-Zinc Combine and the Achisay Polymetal Combine."

Enterprise directors are on the line:

K. Izbaksanov: "In the first days of May the Chimkent workers shipped a lot [partiia] of rolled lead and by 25 May we will fill the second order. The rates

at which it is being filled are 1.3 times above the ordinary work rhythm (which is strenuous even without that); even this figure alone from the statistical account reveals the character of Soviet citizens. I would like to single out in particular the shift of foreman G. Gamanovich, the tunneling brigade of Zh. Amirov, electrician V. Logvinov and fitter P. Korotin—it is impossible to name everyone."

S. Maulenkulov: "We are sending 40 of the best tunnelers from Kentau to the Ukraine. Yesterday we held a meeting at which foremen A. Kokentayev and Yu. Stepanenko (they have been assigned to head up work sectors at the Chernobyl AES) assured that the Kazakhstan people will do everything within their power. There were more volunteers to go to the Ukraine than needed. We are proud of this."

A. Kulenov: "Ust-Kamenogorsk people are supplying rolled lead at outstripping rates. Everyone is working excellently, realizing that this is not somebody else's trouble."

Lipetsk Oblast. The collective of the Yeletsk Element Plant shipped a large lot of power elements for the Chernobyl AES.

With the help of journalists of the oblast newspaper LENINSKOYE ZNAMYA, we also contacted A. M. Avdeyev, director of the Usman Foundry Equipment Plant: "Although we aren't supplying equipment directly for the AES, our customers are located in Kiev and Kiev Oblast. Our collective decided that everything that goes there must be done ahead of schedule. We ask that you pass on through your newspaper that we will do everything dependent on us to mop up the aftermath of the accident as quickly as possible."

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## CLEANUP MOBILIZATION

### CHERNOBYL RECEIVES TECHNICAL, FINANCIAL ASSISTANCE

#### Aid From Belorussia

Minsk SOVETSKAYA BELORUSSIYA in Russian 11 Jun 86 p 3

[Article by SOVETSKAYA BELORUSSIYA correspondent A. Gotovchits: "From the Scene of Events: Help is Coming From Everywhere"]

[Text] "Over the time after the accident," the specialists explained to me, "we were able to get a 'true portrait' of the 30-kilometer zone. Careful measurements showed that radioactive contamination was 'lying' irregularly. Increased background radiation occurred not only in the 'circle' of the 30-kilometer zone, but in the territory lying near it."

And outside it are also populated points. And where there was even an inconsiderable deviation from the allowable standards, it was decided to conduct an evacuation. The decontamination of Sobol and Ostroglyada is being prepared. The villagers are cleaning courtyards and carting away weeds so as to isolate all of this reliably.

Much work on eliminating the accident is being conducted in Bragin. Radiation measurement workers are conducting inspections street by street, house by house, well by well. Behind follow fire trucks and tank-truck sprayers that are washing houses, trees, streets and fences with a special solution. In the park, where the tops of the trees are far above the ground, special mobile towers are being used. The processing of multi-story buildings is also done from them.

"Why is all of this being done?" more pondered than repeated town soviet ispolkom Chairman N. Vasilenko. "The level of radiation in the town is somewhat higher than natural background radiation. The specialists confirm: it is a little better to clean and wash, everything will be in its place."

Nikolay Martynovich unrolled a map of Bragin on the table.

"Our town is small, and is basically single-story. But there are enough concerns. Yesterday the bushes and weeds were cleaned and the lawns were turned on Kirov, Chalidze and Otyabr streets. Today work is being conducted on Sovetskaya and Gagarin streets. Deputies and members of street committees went home so as to elaborate to residents what must be done.

But the main burden lay, of course, on the military subunits and the specialized road and construction organizations of Mindorstroy [Ministry of Highway Construction and Maintenance], Minzhilkommunkhoz [Ministry of Housing and Municipal Services] and Minpromstroy [Ministry of the Construction Materials Industry] of the republic. The usually quiet town was filled with the rumble of dump trucks, asphalt-laying machines, sprinkler trucks and graders.

The soldiers of one of the subunits cut open the ground along the roadway of Sovetskaya Street, truck in the rubbish collected in the courtyards in dump trucks and send all of it to the "grave."

The doors do not close on these hot days at the ispolkom of the rayon soviet of peoples' deputies. Construction workers, planners and road workers drop in to help, sent from Gomel, Orsha, Smolevichi and other cities of the republic. I also see, not for the first time, ispolkom Chairman A. Prokopov and wonder: how does he have enough for this? Phone calls, explanations, instructions, trips to "hot spots," visitors... That atmosphere, when a man cannot weaken for a moment.

He has just come from the office of Belzhilproyekt [Belorussiya Residential Planning] Institute Deputy Director V. Blokhin: he coordinated the external formulation of the rayon center after the renewal, and on the threshold--the next manager. Gomel Sozhskiy Sovkhoz Director N. Gayduk reports that fresh soil has begun to be transported since yesterday: included in the work are 10 tractor trailers that have come from Brest. They are bringing 7,000 cubic meters of earth to the rayon center.

It is hot these days, in both the literal and figurative senses, at the rayispolkom capital construction administration. A program is being developed for the construction of residential housing in the town for evacuees and the erection of standard-type stores, cafeterias, baths and comprehensive reception centers for domestic services. By spring, new towns will appear in the "clean" northern part of the rayon begun, as they say, from the ground up, and new streets in existing villages.

After the collection of the soil, a curb and a layer of asphalt will be laid.

"The task is," says the chief of the UKS [capital-construction administration], rayispolkom deputy chairman A. Kustov, "to build not only housing for those resettled, but everything necessary for life and work."

It is impossible to speak peacefully with Anatoliy Mikhaylovich. Every two or three minutes without fail someone comes in. This time it is the chief engineer of SU-247 [special administration 247] of Gomel Trust No 14, V.



Tyapugin: "I have brought fourteen men. The equipment will be coming tomorrow: three bulldozers, an excavator, a loader and a grader. I want to find out where to conduct work."

While the engineer is getting acquainted with "his" street, on which he will have to lay asphalt, I become interested in the summary of work volume. It is necessary to lay 46 kilometers of new asphalt and 32 of curb. Over the last day and a half, 15 and 4.2 kilometers respectively have been laid. It is necessary to remove 30 decrepit houses and cover as many with new roofs. The construction of new water inlets is being developed, since not all pit wells, even after washing, are suitable. In short, the volume of work is great. And it must be completed in the shortest time.

Something else became apparent: a coordinator of construction work is needed in Bragin, at least at the UKS oblast ispolkom level. This would make possible the better utilization of the equipment and people that have come to help and completely eliminate idle time.

After seven in the evening I go out of the ispolkom onto the main square. The heat slept. Right above the town, a generous thunderstorm rumbled, which had been awaited here for more than a month.

Time will pass, and the children that have gone to sanatoria and Pioneer camps will return to Bragin. Life will get back on track again.

#### Funds Collected in Afghanistan

Moscow IZVESTIYA in Russian 13 Jun 86 p 2

[Article by IZVESTIYA correspondent G. Ustinov, Kabul: "The Topic of the Day: Afghanistan--From the Heart"]

[Text] In the aviation equipment unit serving the airport of the major city of Herat, 86 people.

They sent three to Kabul. The youngest of them was entrusted by his comrades with relating to me the affair that brought them to the capital.

\* \* \*

At the end of May we had our regular political class in our circle, where officers and warrant officers study. During a review of world reports, the conversation touched on Chernobyl and on the courage of those who battled with the fire and who were participating in eliminating the consequences of the accident. Vile propaganda campaigns and malicious delight as reactions to the misfortunes of others are not new to us. We hear nothing different from Western radio transmissions in our own direction. We were stunned by something else: what solidarity the people of all of the republics, cities

and towns of the Soviet Union along with the laborers in socialist countries and friends of the Soviet people in other states displayed with the people of Chernobyl. I don't even know who among us had the idea--to join with this support. Probably, everyone at once. We decided to collect money for a fund to aid the people of Chernobyl.

At first the money--as much as one could--was given by those who were present at that class. But then regular soldiers and servicemen in the unit heard about our action. They requested that contributions be taken from them as well.

\* \* \*

I am looking at the list that was composed for this event in the unit and sent along with the money to Kabul. It has 86 names. Various figures stand across from each of them... The people of Herat collected 15,550 afghanis. Maybe that is not such a large amount of money, but something else is important--the fact that it is from a pure heart.

#### Industries Provide Equipment

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 13 Jun 86 p 1

[Articles by SOTSIALISTICHESKAYA INDUSTRIYA correspondent V. Zenkovskiy, V. Zhuravlev and V. Minin respectively: "The Country Aids Chernobyl"]

#### Sumy

Such a rate for fulfilling orders at the Sumy "Nasosenergomash" [Power Machine Pump] Scientific Production Association cannot be recalled. Every assembly and part for the Chernobyl AES is manufactured here twice as fast as the record times achieved earlier.

"The production-process cycle for electric pumps is 20 days," association Chief Engineer V. Nazarenko tells me. "Our collective undertook to manufacture them in ten. The scale of testing was expanded and receiving requirements were tightened. And, of especial importance, we are sending pumps to Chernobyl that are configured with electric motors and other equipment that is highly prepared for operation. Hook it up and go to work."

How are the Sumy machine builders achieving a double acceleration? I addressed the question to V. Andrusenko, team chief of the welding and assembly workers.

"Large reserves were found," said Vladimir Ivanovich. "Among them can be cited the uninterrupted supply of components, the high skill level of the workers and, of course, the attitude of the people toward the matter has enormous significance. As soon as it becomes known that they are waiting for this or that piece of machinery in Chernobyl, they are ready to work for days

without leaving the shop. The accident at the nuclear power plant was interpreted as our common misfortune and concern, and we will work as much as is needed until the full elimination of the consequences of the accident."

#### Voronezh

Every worker of the PO [production association] for the output of excavators imeni Comintern responsibly interpreted the order of the specialists working in the area of the Chernobyl AES to manufacture, test and ship two lots of excavators in the shortest possible time. No one had to be asked to remain to work after their shift.

The usual shift targets were greatly exceeded, and the workers of the shifts of assembly shop No 6, headed by foremen M. Sidelnikov, A. Tsarev and V. Balashov assembled five more labor-intensive units for hydraulic excavators. The assembly of the main winch unit was completed ahead of time by the team of P. Leshchev in assembly shop No 12.

Working three shifts in a row, the test workers headed by Ye. Sotnikov surpassed the time still more. A saving of a minute at each work station became in the end result 36 hours.

Intensive work also took place in the Zermash Special Design Bureau [SKB] of the same association. With the second lot of equipment, it was necessary to ship to Chernobyl four hydraulic excavators allowing the "wall-in-trench" method of operation. The machinery was not fully to the satisfaction of the customer. The unusual nature of the situation at the Chernobyl AES presented increased demands not only on the moral toughness of people, but also on the capabilities of the equipment that they administer. Understanding this, the designers of the Zermash SKB did not take the time into consideration in doing everything that depended on them so as to fulfill the extremely complex technical task.

Two days ahead of the projected time, a whole complement came through the gates of the association. It delivered 15 highly productive excavators to Chernobyl. Among them were four hydraulic machines for the "wall-in-trench" method. On one of them was a placard with the hastily written words: "We're with you, Chernobyl!"

#### Cherepovets

Chernobyl orders attract special attention in the production-marketing department of the Cherepovets Metallurgical Combine.

"An urgent order arrived for low-alloy steel," reported department Deputy Chief Vladimir Ilich Bushin in his regular conversation with the open-hearth furnace workers. Although the metal is ordered by the metal structural elements plants at Togliatti and Sverdlovsk, this is going to Chernobyl."

Late at night steelmaker operator Mikhail Popov and his assistants completed the steel output.

From the open-hearth furnace workers it went to the blooming-mill rollers and then to the first sheet-rolling shop. In three days, cars with low-alloy steel plate were sent on their way. In the usual procedure, two to three weeks are needed to fill such an order.

How else can they help?

"We can take the schoolchildren of Gomel into our Pioneer sanitorium," the metallurgists decided.

The Pioneer camp of the combine, with a thousand and twenty places, spreads out in the picturesque pine forest on the shore of the Rybinsk Reservoir. Every third place was given over to the guests. They will spend the whole summer here. The fathers and mothers need not worry: the Pioneers of northern Magnitka will warm the Pioneers of Gomel with the heat of friendship.

#### Major Cities Provide Aid

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 7 Jun 86 pp 1

[Article by SOTSIALISTICHESKAYA INDUSTRIYA correspondents L. Shamardina and V. Roshchin, respectively: "Chernobyl: From the Heart"]

#### Volgodonsk

[Text] The Chernobyl residents were expected in Volgodonsk. They arrived here with their families, and as soon as two or three days later the adults went to work. The majority are construction workers and operators at the Rostov AES.

The construction site of the Rostov nuclear plant became the new work place for the team of insulators of P. Titarchuk from Chernobyl.

"Here we have found shelter, work and concern," said construction superintendent N. Lishilenko, who came here along with his team. "The people of Volgodonsk not only accepted us here in fraternal fashion, but even replaced us at the Chernobyl Plant."

Immediately after the first reports of what had happened, construction superintendent P. Kachanov, working in "chemical protection" in Volgodonsk, sent a telegram to USSR Minenergo [Ministry of Power and Electrification]: "I and my team are ready to leave to take part in the elimination of the consequences of the accident." The call came. And, switching their tools and work, as they say, from hand to hand, the Volgodonsk team left for Chernobyl.



## Minsk

A thankful letter arrived for the collective of the Minsk Chemical Plant from the capital of the Ukraine. The collegium of Gosnab of the fraternal republic was sincerely thanking the people of Minsk for their help in eliminating the consequences of the accident at the Chernobyl AES.

In the very first days, as soon as it became clear that liquid nitrogen would be needed for cooling the damaged reactor, the chemical workers set about filling the special order. The task was complicated by the fact that possibilities for increasing the output of this product were practically exhausted. But, understanding the particular importance and urgency of the assignment, the laborers of the enterprise applied every effort to ensure the timely fulfillment of the supply to Chernobyl without letting down their regular customers. The shift of senior foreman N. Girlovskiy tried especially hard, and the staffs of N. Ponomarev, V. Adamovich and others worked creatively. The related-industry colleagues of the chemical workers also did not lag--the railroad workers, who delivered special tank cars loaded with nitrogen without delay.

[Article by SOTSIALISTICHESKAYA INDUSTRIYA correspondents N. Ordinyan, P. Shevchenko and V. Kurapin respectively: "The Country Aids Chernobyl"]

## Yerevan

When the column of nine multi-ton KamAZ trailer trucks approached the entrance of the lead plant of the Yerevan Armelektromash Association, it was exactly four o'clock in the afternoon.

"From Kiev?" was all the watchman asked. Receiving a confirming nod from the tired driver, he jumped up onto the running board of the truck and led the column to shop 20.

Here they were ready in advance for the receipt and unloading of the vehicles.

"The first mobile electric power plant was loaded an hour after the arrival of the column," related S. Arutyunyan, the secretary of the shop party committee. "With the subsequent ones, we began to manage more quickly. Concertedly, smartly, precisely, as if they had worked side by side for years, everyone labored--the crane operators, fitters and assemblers, welders, the drivers from Kiev."

"Everything started three days early," related shop chief S. Daniyelyan. "At 9 in the morning, at a meeting in the office of the general director of the association, we were told that the shop had to manufacture and dispatch to Kiev four brands of mobile electric power plant in urgent fashion for eliminating the accident at the Chernobyl AES."

In just a few minutes it was estimated who had to do what. Precise supply schedules were composed.



Earlier that day, all of the workers of the shop that were in the city were working. In a day, a doubling of the assembly standard was achieved. The first carload of electrical equipment was dispatched to Kiev. In two more days, the electrical machine builders of Yerevan were regularly shipping their products according to the orders received not only to Kiev, but also to Gossnab bases in Poltava, Nikolayev, Gomel and Orsha.

"As of today," said association General Director P. Manvelyan, "more than 400 mobile electric power plants of various capacities, high-frequency converters, generators and transformers have been shipped. The electrical machine builders not only manufactured and shipped equipment for Chernobyl in a few days, but are also fulfilling their planned supplies at a rapid rate."

Leaving the association, I looked in on the marketing department. Its manager, K. Melikyan, was elaborating with the management of Shop 10 the manufacturing times for a new order just arrived—for the manufacture of 30 mobile transformer substations.

#### Lvov

The collective of the Lvov Bus Works has completed the fulfillment of an order for Chernobyl. A lot of the series-produced IAZ-695N vehicles was manufactured here in an extremely short time, in which it is possible to work on terrain contaminated by radiation.

"It was necessary to resolve a number of complex design, technical and other tasks that were not encountered in earlier practice here," related Chief Designer V. Moskalev, "hermetically sealing the cabin and the driver's cab, creating reliable artificial ventilation, and solving other problems."

"All technical questions were resolved efficiently along with the employees of the VKEI [All-Union Design and Experimental Institute] of Bus Construction and other sector design organizations," said partkom secretary N. Golyanik. "A good word needs to be said about the communists, and first and foremost the body shop headed by I. Sosolko. It was they that proposed extending the work shift to 12 hours during the fulfillment of the order. Considerable contributions to the common cause were made by welder S. Osadchenko, fitters M. Bedriyev and M. Yakimiv, shop section chief for bus assembly and testing communist M. Semeniv, M. Poddubchshin, the chief of the technical section of this shop, and the specialists of the body assembly and welding shops and other subunits."

Calculations show that under usual conditions the fulfillment of this important order beyond the plan would require no fewer than 20 days, but here the first buses were dispatched to the designated place in two days.

## Andropov

The collective of the Verkhnevolzhskkabel [Upper Volga Cable] Plant received an important and urgent order--to manufacture 120 kilograms of enameled wire of increased strength for the Chernobyl AES. Usually no more than 30 kilograms of this wire is produced in a quarter, but here--120, and over several days in all.

The principal load fell on the laborers of the drawing and enameling shops. They worked without regard for the time and did not leave their work places.

As a result, the plant collective required a total of only two days to fulfill the urgent order and ship the increased-strength wire for the Chernobyl AES.

## Performing Artists Assist Chernobyl

Moscow IZVESTIYA in Russian 12 Jun 86 p 3

[Article by N. Kishchik: "To Account 904"]

[Text] "Today is not an ordinary day--it is special for us, the artists, and the concert is not ordinary. It is dedicated to you, our brother in Chernobyl, today the whole country and all people are with you. Accept, Chernobyl, from the heart and with good feeling, our artistic contribution to the coffers of aid"--with these words of the leader this surprising concert began, which the artists themselves called a review of all the genres of Moskontsert.

An hour before the start, "fishermen" of extra tickets appeared at the entrance to the Rossiya Concert Hall on June 10. And long before the first bell, it was already animated and festive backstage--358 artists were taking part in the presentation that became the event of the day: "Variety on the March."

And what is this Moscow Variety? It is 200 concerts daily in Moscow and other cities of the country. Seven hundred of its artists appear abroad annually. The Moscow Variety is competitions, festivals, television programs... Two and a half thousand artists have joined ranks in eight creative master workshops. And in each of them--a philharmonic or original genre, choreographic or satirical and humorous--is its own renowned masters, peoples' and honored ones, the winners of all-union and international competitions, whose art is known and loved by audiences. There is no city on the map of the country where the artists of the Moscow Variety have not visited, where the traditional words have not been heard: "Good evening, comrades! The artists of the Moscow Variety begin the concert!"

These routes were laid out in the old days by the great masters of variety art. Its history was reflected by scores of film chroniclers, becoming as one of the concert series. Here on the screen is 1918, the building of the

present-day GUM, with babble in the center of the hall. There, where there is a fountain, on the field of the camera is impressed, probably, the first performance of the acrobats of the Moscow Variety. We also see the first appearance of the soloists of the Bolshoy Theater in the Hall of Columns, the first concert of the famous chorus imeni Pyatnitskiy, the "barefoot dance" troupe of Isadora Duncan... The famous voices of the artists are heard, appearing at the fronts of the Great Patriotic War: Klavdiya Shulzhenko, Lidiya Ruslanova, Leonid Utesov...

The audience did not let the artists go for a long time. Director L. Feldman relates:

"When the artists decided to give a concert for the Chernobyl Aid Fund in Rossiya Hall, only one problem arose: how to give everyone who desired to appear the opportunity within the framework of the evening."

"The collection from the concert--12,000 rubles" (to which went: the cost of the tickets, the pay of every artist and worker of the Rossiya Concert Hall working on this day off; the management offered the hall free of charge) "--will be transferred to the Chernobyl account," said Moskontsert Director Konstantin Bulgakov. "The contribution of Moskontsert to date is approximately 30,000. This sum will grow further. Our collectives and the artists themselves have already given dozens of concerts for the fund to assist the people of Chernobyl."

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## CLEANUP MOBILIZATION

### MILITARY COOPERATION IN CLEANUP

Moscow PRAVDA in Russian 12 Jun 86 p 6

[Article by PRAVDA correspondent O. Gusev, Kiev Oblast: "A Film Showing for the Third Shift--The Chernobyl AES: A Chronicle of Events"]

[Text] Officer N. Goncharenko received a slightly unusual request that day: ensure the decontamination--that is, the cleaning of radioactive dust--of the local movie theater building. The purpose was to organize a viewing at the request of those who were working in the emergency zone. It can be said at once that the task, assigned to the chemical-warfare soldiers, was fulfilled on time: the film ran to a standing-room hall. Then came a proposal to increase the number of shows--it was necessary that the third shift also visit the theater.

For the chemical-warfare soldiers, commanded by Officer V. Kolpin, the front line lay right in the center of events: they were charged with disinfecting a number of streets in Pripyat, the power workers' city. The personnel of the subunits of Sr Lt A. Voronin and Capt N. Kuleykin placed powerful streams of special machinery into operation--tank-truck sprayers (ARS), reaching the walls and windows of the tallest buildings with them. The "warriors of cleanliness," dressed in special protective suits, worked with brushes and, where it was especially difficult, scrapers and even knives. They were occupied, at first glance, with a none-too-difficult operation--cleaning equipment returning from the worksites. But if you take into account the fact that every motor vehicle and every tracked tractor or armored car brings a portion of radioactive residue from the damaged-reactor zone and they must unfailingly be washed, it becomes clear how crucial is the work of drivers V. Fedorychev, N. Borodinov and the others that maintain the ARSs.

It is difficult to make them out through the rainbows of their streams, but for Maj V. Bushin each of his subordinates working at the sanitary processing point is far from one and the same. Each soldier, be he Sgt Kraynov, Jr Sgt Golov or Pvt Batalov, has a careful attitude toward the matter. The soldiers are also assisted by the businesslike support of local specialists. I saw how precisely and harmoniously B. Shinkarenko, a deputy department chief of the Chernobyl AES, and A. Kurunov, a master repairman of dosage-monitoring instruments, labored shoulder to shoulder with the soldiers.



The closest possible cooperation, aid and mutual assistance of the army and civilian services in the 30-kilometer zone," noted Maj Gen M. Zarochentsev, "is a feature of the current situation in the Chernobyl beachhead. People became better and more sincere and they try to assist each other to the utmost, seeking any opportunity to lighten the labor of their comrades and create the safest possible conditions for them."

The crew headed by Sr Sgt A. Kostomakha, a candidate member of the CPSU, discovered a corridor in the plant zone with a very low radiation level in the course of reconnaissance. His armored car guided three crane trucks along this route, and then for many hours running delivered AES workers to the damaged reactor. And take the everyday side of bivouac life. If necessary, even late, the doors of the shop do not close until the last customer has been served. The motion-picture projector surmounts dozens of kilometers of country roads so that the beginning of the film showing is not delayed. Even at night, bouquets of flowers are found for subunits returning from their assignments with those having birthdays.

Recently the soldiers of Lt Col I. Kitaygorodskiy met the Fedotov brothers in this manner. Vitaliy, a junior sergeant, and his brother Vasilii are electric welders. They work along with the other soldiers on both the near and distant approaches to the accident unit. On the distant ones, in order to lay wider and more suitable roads to the reactor, and on the near ones in order to do everything required to eliminate the consequences of the accident.

The experience accumulated by the brothers before army service during their work on the Druzhba and Pomary--Uzhgorod pipelines assists them in quickly joining the pipe with flame, through which run concrete for the worksite. The brothers do more than just handle the welding in excellent fashion. They proposed managing on their section with just one auxiliary mechanism where there were two yesterday.

"And this means," explained Sr Sgt I. Denisyuk, "that the brothers' proposal makes it possible to remove at least one tractor operator from the danger zone."

Yes, sometimes the verity of the old but not obsolete soldier's principle of "Look out for yourself and your comrade" is manifested with such clarity. And how else but with the noble effort to remove the misfortune more quickly is the behavior of Sr Sgt F. Kulyba dictated in extreme situations. He along with his detachment did everything possible, managing at the beginning with ordinary tools, so as to penetrate the concrete wall, many meters thick, as fast as possible to bring in cooling water pipes. Or the enthusiasm of the subordinates of Sr Lt V. Timoshenko. All communists and non-party members, as well as Komsomol members, conduct themselves at the front line like true Bolsheviks.



Pvt V. Dyatlov, Sr Sgt B. Omelchuk and Officers A. Babiychuk and N. Litvin are laboring on the main line, right at the reactor: they are conducting dosage reconnaissance and decontaminating the soil. And all of them with maximum speed and the systematic surpassing of the standards.

The soldiers occupied with the elimination of the accident found out about the high evaluation of their work by the government commission with satisfaction.

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## CLEANUP MOBILIZATION

### AEROFLOT ASSISTS IN CLEANUP

Moscow VOZDUSHNYY TRANSPORT in Russian 26 Jun 86 pp 2-3

[Article by VOZDUSHNYY TRANSPORT special correspondent Yu. Zaychenko: "Aviators on Duty in the Chernobyl AES Region--Wings of Aid, Wings of Courage and Skill: Your People, Aeroflot!--On Government Commission Assignment"]

[Text] There were many people in the room, all in the same dark-green uniform. From the way the officers simultaneously rose from their seats, I understood that honored military pilot of the USSR, Lt Gen Avn P. Nedzelyuk, had come into the staff room. He heard the report of the duty officer, nodded his head in satisfaction, removed his cap and wiped his tanned and flushed face with a handkerchief.

"It's like a furnace out there," he said, nodding toward the window where there were tents alongside the Chernobyl rayon ispolkom building in the shade of trees and in the sun.

He sat at the table, ran an attentive glance around those present and unexpectedly began to relate how he had just been flying with one of the managers of the government commission to the fourth power unit, and from there--several dozen kilometers to the reservoir--had been proposing an assignment. When putting in for a landing they noticed from the helicopter two men on the shore with fishing rods, and the hearts of the general and the responsible official jumped, as both of them, as became clear, were inveterate fishermen. They tried to land alongside, but those who were sitting at the water took to their heels to the nearest woods along with their fishing rods. Thus they were unable to find out if they were biting or not.

The officers began to laugh, the tension evaporated in an instant, and it became somehow simple and comfortable in the room--that moment when it is best to move on to the intended conversation. And the question for Pavel Matveyevich was a single one: how did he see the work of his colleagues--the specialists of civil aviation?

"I'll put it this way: your comrades--both line workers and managers, and I regularly encounter them here, in Chernobyl, in Poleskoye and other places--deeply comprehend the essence of the tasks placed before them, and are seeking out and finding efficient methods for resolving them in the shortest possible

times. If the results accomplished by the collective of the combined subunit headed by Ivan Sergeyevich Makarov are translated from army to production language, then the pilots and ground specialists have exceeded the plan every day and the quality is as required. You see yourselves what sort of weather accompanies matters, and here as never the comparison is appropriate: people have turned out to be stronger than metal. Sometimes the equipment cannot tolerate the intense strain, but the crews meet their targets without fail."

A person becomes known in misfortune... This simple and wise formulation has long been brought out by life. Misfortune is like a hostile fortress, and certain people, and they are the overwhelming majority in our society, advance on it in the front rank, eliminating feelings of doubt and fear and thoughts of weakness and helplessness; there are others, in a miserly quantity, who hide behind the backs of others, hug the earth and even run away. It is precisely this ratio of selflessness to weakness that has proven once again the high level of social, civil and moral maturity of the Soviet people, including the aviators of our sector as well.

The events at the Chernobyl nuclear plant, unique in their rarity, complexity and tragedy, became strict and precise verifiers of human qualities. Who passed this most difficult exam and how, it is still early to say, and only with time is the fog of obscurity dissipated, and the brave given their due, along with the faint-hearted... However, even today, over the course of the two months since the beginning of the elimination of the consequences of the accident, the labor of some categories of specialists, carrying out their civil duty behind at barriers of danger and uncertainty, is evaluated simply. Lt Gen Nedzelyuk also confirms such an approach.

Pavel Matveyevich speaks in a leisurely fashion, and there is no hint of pomposity in his words. He knows the situation precisely: who, where, what and how much to do, and betrays a cluster of events and actions. He knows many of our managers on a personal basis, the amount of work fulfilled, only rarely elaborates on data from his assistant--the Aeroflot representative to the staff and commander of the PANKh [Use of Aircraft in the National Economy] of the Kiev Airport, Aleksandr Petrovich Rutsyuk.

"You say that the crews of the civil aircraft are waging a siege from secondary positions," the general repeated a part of my introduction. "That is not quite so. Now I myself, for example, saw an Mi-8 helicopter from the Komi Administration conducting decontamination of an area right next to the plant on the most contaminated, and therefore dangerous, traces. A kilometer from it an air force helicopter was engaged in the same thing."

And who here made the weather, to put it thus, in the literal and figurative sense?... Do you see what a dry spell there is? This "obstruction," placed in the sky by the crews of the An-30, An-12 and Yak-40 aircraft, having an active influence on the clouds, has prevented, to a considerable extent, the contamination of the reservoirs. In short, the military and civil aviators entered this fight at the very same time, and they and others are making every effort to eliminate the consequences of the accident.

Yes, this began on the morning of April 26. Then, helicopter pilots V. Bashorin, P. Voronovskiy and L. Gulko of the Kiev Airport flew to the Chernobyl region--they delivered members of the preliminary commission, scientists and various equipment to the accident site.

Every subsequent day, new crews were added to this formation--from Moscow, the Urals and Siberia. I had occasion to meet many of them at the beginning of May, when full information about the scale of the accident was lacking. Assignments for the aviators came unexpectedly, there was barely enough time to prepare, and the rate of flights reached a maximum. But all of the assignments of clients were fulfilled on time.

During this most difficult period, it was impossible not to fall to thinking about something. After all, paragraphs in the management documents allowed the aviators to refuse assignments if they were uncertain of their successful fulfillment. It is also possible to cite the absence of instructions for carrying out new types of work--such kinds, as we understand, that there were no time for in the situation, and clear-cut legal nitpicking or elementary bureaucracy could have brought unpleasantness upon the pilots. Furthermore, there was not enough technical equipment for outfitting the crews--here is a far from complete list of reasons, fully significant, that existed at the moment, for leaving the airport. But no one left...

I remember how Aleksandr Viktorovich Khrapov, commander of an Il-14 from Myachkovskiy, and pilot-instructor Viktor Petrovich Pashkov, returning after an exhausting 9-hour flight on radiation reconnaissance, worried about how their work would be evaluated by the clients. They complained in passing about the shortcomings in organization and supply and requested, if possible, some help. And they almost did not remember the dangers, although they understood perfectly well where they were operating: they knew that an invisible enemy, radiation, was pouring at them from the ground in bursts. But they were most concerned that nitpicking not follow their work without instructions.

"How do you feel there?" the question was posed those days to the crew members.

"It is unpleasant when you cannot see and feel the danger. But someone has to do the work..."

In listening to the story of Aleksandr Petrovich Kutsyuk, it was impossible not to ask: what guides the people working in the sky over Chernobyl? Well, at least this incident, if insignificant, but of high moral sense...

Two of them--aircraft commander Boris Slepchuk and co-pilot Nikolay Kirichenko--were going to Zhulyany on June 5. Both were in the complement of a large group was to fly to the populated point of Poleskoye, from where they were to carry out flights for spreading a special reagent in the immediate proximity of the nuclear plant. They knew it was dangerous there, and in addition there was no consolation in the forecast: as the meteorologists promised, the heat did not abate.



They went to the suburban electric train stop, but it did not come according to the schedule. The fellows got nervous. They ended up almost half an hour late for pre-flight preparation. And the crew was dismissed from the flights. What next? They could have tossed aside their fears, waited for a while, until the commander sent the group on assignment, and then, presenting information from the railroad on train delays, proven their innocence. And remain in Kiev. They did not behave in this manner.

At first they followed on the heels of their senior commander, V. Kravchenko, trying to prove their innocence and persuade him to allow them to fly. Next they "settled down" at the level of authority of A. Kutsyuk, who required an explanation from the pilots. When he read it, he immediately took it to the chief of the inspectorate of the Ukrainian Administration, V. Golydbin, and the chief of the pilots' department of PANZh, V. Kartashov. One phrase forced them to act: "Our lateness for pre-flight preparation was not cowardice, but was associated with the disruption of the railroad schedule. Therefore we request that we be sent to Polesskoye with our comrades."

In an hour they left.

I spent much time alongside the aviators in these tense weeks. Differing in age, appearance and character, they revealed a striking similarity in one thing--in their attitude toward the cause. What made them fearless in this exceptional situation? I think that not one of them avoided an internal struggle before saying a decisive "yes," after all every person must enter into such an argument with himself. Because this is connected both with the instinct for self-preservation, and with a concern for people near and dear, and finally with the simplest wish--to live... On the other hand--duty, responsibility before one's associates, conscience... Why did the crews from the Ukraine, the Urals, Moscow, and Siberia, and aviators from other regions of the country, enter the battle rank upon rank against the invisible and insidious enemy? It is no discovery that the character of our people has always been distinguished by solidity of spirit, fully demonstrated in trying times, and has identified the fate of people with their own. It is precisely this valuable orientation point that leads the Soviet people, and there is nothing higher than it--any grief is divided into parts. In this is the whole answer.

I remember, as I was taking part in the flight of an An-2 crew for the decontamination of terrain in the area of the plant, how my consciousness was stung by an unpleasant thought: what if an engine fails suddenly?... We were at a low altitude, only 150 meters, the forest stretched right to the horizon, and beyond it--contaminated terrain. No, the engine hummed evenly, confidently--and thus for 8-10 hours each day, in all aircraft, in humid and hot air. The rear services did not let us down...

The high work capacity of the equipment was also associated with the heavy sweat of the aviators, those who, unseen, prepared it for action in the shortest period of time. There is no exaggeration in these words. For example, the flight of the first ten An-2s to Polesskoye was planned for June 5, and the planes arrived at the base in Kiev only on the evening of the day before--the kolkhoz airport could not be cleared. Over several hours, the



technical and engineering staff was able to prepare them for the new type of work. And doesn't the fact that all questions of accommodating the crews in the rayon center were resolved in 3 hours, and communications were established between the operational airport and various facilities in 2 hours, strike a good chord? Analogies to such an organization, as the commanders acknowledged, are still not seen in practice.

The initiative, resourcefulness, and high personal efficiency of engineer I. Urazov, team technician A. Koval, technologists I. Poddubnyy, A. Zaika and I. Sidlyarenko and Kiev Airport ERTOS [Operation of Radio Technical Equipment and Communications] specialists G. Nikishin and A. Gnilenko made it possible to ensure an uninterrupted air conveyor for the decontamination of the banks of the Pripyat.

"The tireless labor of ground specialists made it possible for our crews to fly 700 hours overall over eight days and process reagent on a considerable area of riverbank," subunit deputy commander P. Giltovskiy told me in Polesskoye during a shift change. "Who could be singled out among the guys? All of them. The crews of A. Tkachenko, B. Mirtalibov, V. Sakhrnyuk, A. Akimenko, Yu. Melnichuk, A. Kononov, B. Slepchuk, A. Petrishin, M. Chmut and A. Timchenko are deserving of the highest regard."

And the managers of the combined subunit themselves executed their duties well. Any time it happened that orders were read out from what was written out in a rough hand copy, their implementation was begun immediately, and the traditional typewritten form was obtained later.

"We understood and understand the importance of the tasks placed before the crews, and therefore we try to help with all existing resources," Nikolay Ivanovich Prizachenko, first secretary of the rayon party committee, told me on the Polesskoye field. "The party raykom, rayon ispolkom, civil defense staff and representatives of Oblselkhozkhimiya [Oblast Agricultural Chemicals] cooperated in the setting up and immediate organization of the aviation operations."

Thus is the Soviet character always demonstrated in times of misfortune.

Hiding in the shade from the intense heat with the commander of a military Mi-8 that had flown in from Kiev, to which Lt Gen Avn Nedzelyuk had assigned me, we were discussing various things. At some moment, an impassioned bird's singing was borne down from above, and I lifted my head. Two larks hung far above us.

"They perform well," I couldn't resist saying.

The captain nodded his head and asked:

"Did you know that the little birds returned here quite recently? Only three or four days ago.."

I hadn't known that. And I thought: people will undoubtedly return to these regions behind the birds.

12821

CSO: 1800/476

## CLEANUP MOBILIZATION

### MOSCOW INTERVIEWS CIVIL DEFENSE OFFICIAL ON CLEANUP

LD191816 Moscow Domestic Service in Russian 1430 GMT 19 May 86

[Report from Chernobyl AES by special correspondent Vladimir Mikhaylenko and sound producer Mikhail Segal]

[Text] [Mikhaylenko] The staff of the tactical headquarters of the Civil Defense Directorate is working in the immediate proximity of the accident site. Heading it is Colonel General Grigoriy Petrovich Yashkin, with whom we have arranged a meeting today. The tables are covered with telephones, and working maps, piles of colored pencils. A short operations meeting is coming to an end. Grigoriy Petrovich, on this map the Chernobyl nuclear station is surrounded by a rather large ring. Is this the actual 30 km zone?

[Yashkin] Yes, this is the very 30 km zone. Apart from this 30 km zone there is a crucial zone [zone otvetstvennosti] immediately around the nuclear power station and a 10 km zone.

[Mikhaylenko] Where we are?

[Yashkin] Yes, the very one where we are. From here the management of all kinds of work by all ministries and departments, local Soviet and party bodies, on eliminating the consequences of the accident, is being carried out.

[Mikhaylenko] What is being done in this 30 km zone right now?

[Yashkin] Special groups of servicemen and representatives from ministries and departments are carrying out work to decontaminate the area--various buildings, including housing, and soil treatment. This work is being carried out successfully and solutions to problems have been found. In the zone largely here in a northwest direction about 50 populated areas have already been treated, and in the southern zone about 60 populated areas.

[Mikhaylenko] As far as I know the zone itself has been enclosed by a special fence.

[Yashkin] Yes, this work was checked during the days straight after the accident. Therefore there is no penetration into this zone at all.

[Mikhaylenko] Which means that getting in there...

[Yashkin interrupting] One can only enter through control admission points and special treatment points. In all populated areas this is organized by traffic control services [komendantskaya sluzhba]. All work is being carried out in close interaction with local Soviet and party bodies. Local inhabitants can have peace of mind about what they have left there. Everything is in reliable hands and is being protected by Soviet servicemen and representatives of the Ministry for Internal Affairs.

[Mikhaylenko] And here along the River Pripyat vigorous work is also being carried out. There is earth-moving equipment there.

[Yashkin] After the accident engineering teams were organized; here and along the whole length of this dangerous zone dykes were built and time has shown--although there was rain here--that no polluted substances have gotten into the River Pripyat.

[Mikhaylenko] Grigoriy Petrovich, right now many people in our country are intending to go on their summer vacation and the question often arises as to where one can and can't travel. What would you advise? What is the situation?

[Yashkin] As far as I know--the situation warrants no grounds for anxiety. The resorts and holiday zones of the Crimea, Sochi, and around Kiev are not dangerous to the population.

[Mikhaylenko] There are no restrictions.

[Yashkin] And I can confirm this fully. I have seen the situation at first hand.

[Mikhaylenko] Grigoriy Petrovich, you went through the whole war. Do any similarities suggest themselves when you see all this?

[Yashkin] You see, at war, you are dealing with a real enemy, a visible one.

[Mikhaylenko] You can see where they are shooting.

[Yashkin] Of course, but here is a perfidious, dangerous opponent. It is invisible and of course all the efforts and means which we have at our disposal are necessary to painstakingly investigate [razvedka] to establish the radiation level alone. And by the way these radiation levels are a sort of cumulus [kuchevoy]; they are not continuous and only after they have been established can one make the decision on what has to be done.

[Mikhaylenko] Is there a lot of work ahead?

[Yashkin] Yes, evidently. Directly within the 30 km zone this work will be prolonged further. Of course this work will last more than one month.

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## CLEANUP MOBILIZATION

### ARMY POLITICAL CHIEF ADDRESSES TEAMS

PM120903 Moscow KRASNAYA ZVEZDA in Russian 11 Jun 86 Second Edition p 2

[Report by correspondent Colonel A. Polyakov: "Duty and Responsibility"]

[Text] A meeting of the party aktiv of units and subunits participating in the liquidation of the consequences of the Chernobyl AES accident was held.

Chernobyl'skiy Rayon's House of Culture--situated in the city's central square, until now it seemed uninvolved in the tense work being done at a feverish pace in the neighboring buildings which house the government commission and representatives of the military command. But life is returning to the streets of the city which is welcoming those who are helping it to resume normal life more swiftly. The Pripyat party gorkom is located in the main street. A press center has been set up, kiosks of the USSR Ministry of Communications Main Administration for the Distribution of Printed Matter are operating, and the Administration of Trade Enterprises for Servicemen has opened a store. The radiation level is steadily falling, sound results are being produced by the decontamination work which has been launched on a broad front, and all this is confirmed by the fact that life in the city is becoming more active day by day.

Vehicles with military license plates drive up to the House of Culture in a steady stream. Communists are gathering for a meeting of the party aktiv from units and subunits participating in the liquidation of the consequences of the Chernobyl AES accident. They are wearing field uniforms or special clothing. Some have only just finished their combat work (there are no other words to describe it), others will soon be on their way to do theirs.

Quite a few persons of whom KRASNAYA ZVEZDA has already written are among the participants in the meeting. Here is Major General of Aviation N. Antoshkin, the first to head the work on "bombing" the No 4 reactor crater with sand and other protective materials from the helicopters. Political worker Lieutenant Colonel A. Belchenko has only just returned from the "spots" where his subordinates are working. In the course of the few minutes remaining until the start of the meeting, company commander Senior Lieutenant V. Kovakin checks the radiation reconnaissance route with his commander....



The report delivered by Maj Gen A. Bilenko analyzed certain results of the work done by the commanders, political organs, and party and komsomol organizations of units and subunits participating in the liquidation of the consequences of the accident. The main speaker and the other speakers--Yu. Maslyukov, chairman of the government commission and deputy chairman of the USSR Council of Ministers, generals, and officers--spoke of the tasks which remain to be solved, of the experience accumulated under these unusual conditions, and of the role of party organizations and Communists in the mobilization of people for the best execution of the motherland's orders. It is important that our entire organizational work should be specific to the utmost and be improved in the spirit of the 27th CPSU Congress demands.

I have had many occasions to attend party aktiv meetings, but this one was unlike any of the previous ones. The speeches were, in the front-line fashion, brief and extremely to the point. Let me cite just one example. One of the Communists proposed the use of specialized equipment for decontamination work. Another proposal followed immediately from the floor, and it was not simply entered in the protocol of the meeting but was actually singled out as the most effective one by government commission specialists.

The meeting was addressed by Army General A.D. Lizichev, chief of the Soviet Army and Navy Main Political Directorate. He emphasized the great responsibility borne by the servicemen participating in the liquidation of the consequences of the accident. The whole people are following the work on decontamination of the area, the population centers, and the nuclear power station, and the region's return to normal life. It is important to ensure the proper work rhythm. When on a mission, each Communist and Komsomol member and every serviceman must be accurately aware of what he has to do and must do it efficiently and to a high standard. The main point for commanders is not just to present problems and raise questions, but to find the best ways to solve them. And to solve them quickly and without delay, for which all the necessary conditions have been created here.

Members of the government commission spoke highly of the servicemen's actions and noted their discipline, and great bravery and courage. And this is how it should be. The serviceman must always march in the face of danger for the sake of fulfilling the set task. The party organizations educate people in exemplary heroism. At the same time, it is their duty to warn against exhibitionist temerity and bravado.

"I speak of this," Army Gen A.D. Lizichev said, "because in some comrades an 'element of habituation' to the danger has developed, which we saw for ourselves while touring the power station zone and talking with servicemen engaged in the decontamination of the AES territory. For us people are more precious than anything else, and therefore the concern for them must be constantly at the center of attention by commanders and party organizations, and a high degree of organization is the best expression of such concern."

It was noted in the speeches that the work now being done by the units and subunits posted here has not been experienced before, that the scales of the work is large and the time schedules tight. All this demands creative solutions to problems, and also the testing and flexible introduction of new features, which would help attain the set goal more swiftly and more reliably.

Servicemen operate within the 30-km zone shoulder to shoulder with representatives from various ministries and departments and the local population. This organic and reliable spiritual bond with the people has been and remains a most important factor of the strength of our Army and Navy, the speaker emphasized. Our party political work is oriented toward ensuring that people always perceive the servicemen as defenders in misfortune and loyal assistants, and perceive their selflessness, bravery, modesty, purity, honesty, organization, and cohesion. The successful fulfillment of the most important state task is our weighty and specific contribution toward the cause of the whole people.

The chairman of the government commission announced during the party aktiv meeting that N.I. Ryzhkov, chairman of the USSR Council of Ministers, had only just telephoned to wish the servicemen successful work. The participants in the meeting greeted this announcement with applause.

Taking part in the work of the party aktiv meeting were G. Dzys, deputy chairman of the Ukrainian SSR Council of Ministers; Lieutenant General V. Arapov, member of the Military Council and chief of the Kiev Military District Political Directorate; I. Panin, senior official of the CPSU Central Committee; Lt Gen A. Mokrous, representative of the USSR Civil Defense; and representatives of ministries and departments.

On behalf of all servicemen, the participants in the party aktiv meeting assured the party Central Committee that the Communists and the entire personnel will devote all their strength and energy for the successful fulfillment of tasks assigned to them within the set time limits.

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CSO: 1800/465

## CLEANUP MOBILIZATION

### PHOTOS OF AES CLEANUP

[Editorial Report] Moscow SOVETSKAYA ROSSIYA in Russian on 24 May 1986, carries on page 1 a photograph of Private S. Vyalov (left) and Junior-Sergeant V. Komissarov, chemical warfare monitors, engaged in dosimetric monitoring (Fig. 1). Moscow KRASNAYA ZVEZDA in Russian on 22 May 1986 carries on page 1 a picture of soldiers decontaminating the AES warehouse area immediately adjacent to the crippled reactor. The caption reads: "Pictured is an unforgettable moment of soldiers in combat with an invisible and deadly enemy--radioactive contamination." (Fig. 2) Moscow NEDEL'YA in Russian No 22, on 26 May-1 June 1986 carries on page 12 a picture of armored personnel carriers getting ready to enter the Chernobyl AES zone. The caption reads: "Preparing to enter the AES zone." (Fig. 3)



Fig. 1

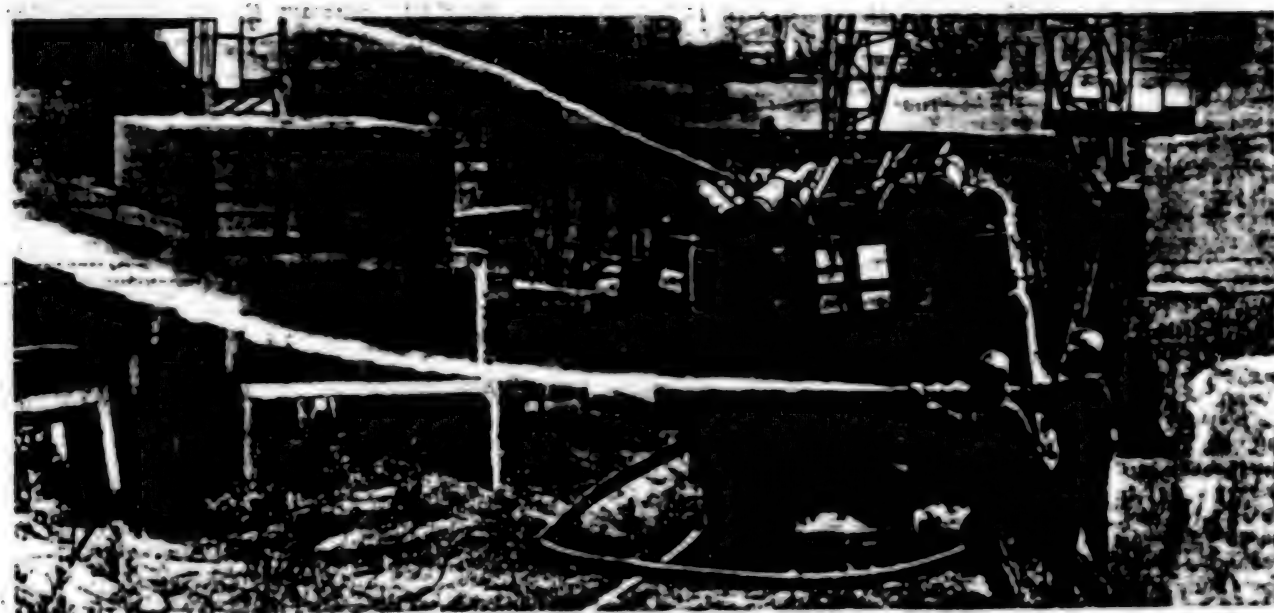


Fig. 2



● Техника готовится к выезду в зону АЭС.

Fig. 3

## CLEANUP MOBILIZATION

### GENERAL ARAPOV EXPLAINS USE OF MILITARY PERSONNEL IN CLEANUP

Kishinev SOVETSKAYA MOLDAVIYA in Russian 4 Jun 86 p 4

[Report by V. Itkin and TASS special correspondent O. Moskovskiy: "The Perimeter of Courage"]

[Text] Area of the Chernobyl AES--In military jargon the word "perimeter" means an arbitrary line from which the start or end of some troop action is measured. The perimeters laid down these days in the region of the Chernobyl AES can with confidence be called the perimeters of courage.

A situation map in the area of the power station lies on the desk of Lt Gen Vitaliy Fedorovich Arapov, member of the military council and chief of the political directorate in the Red Banner Kiev Military District. On the map, two colors predominate: red, signifying the location of units and subdivisions [podrazdeleniya] along the perimeter of a 30-kilometer zone; black, the center of the circle showing the location of the damaged reactor and the town of Pripyat.

General Arapov is speaking: "Troops are moving here, into a special zone, in order to help in the cleanup after the accident. They are working at the station itself and around it. So you see, the perimeter of courage here lies everywhere."

"... Given all the severity of what has happened, damage has been contained largely thanks to the courage and skill of our people, their devotion to duty, and the well-coordinated actions of all those involved in cleanup following the accident," comrade M.S. Gorbachev noted in his 14 May television statement. These words can also be applied in full to Soviet troops. They are distinguished by their selflessness in the work to clean up after the accident at the station.

It was here on the land of Kiev that 43 years ago the perimeters were drawn. And they too were perimeters of courage. Along those perimeters Soviet troops smashed the enemy during the course of the Kiev offensive. Over the years the scars of war have faded. But the communication trenches can still be seen, and the dugout have been preserved. The memorials and monuments to the



liberators bear witness to the former battles and the heroism of those who took part in them.

And now the grandsons of those frontline fighters are in action.

"Why are our troops taking part in these events?" asks Vitaliy Fedorovich. And he answers his own question: "One of our general military regulations directly states that troops can be used for cleanup operations after natural calamities."

The representative of the State Commission set communist, Capt Petr Sborovskiy the task of finding a specific solution to eliminate the fault beneath the fourth damaged block. Volunteers Jnr Sgt P. Avdeyev and Private 1st Class Yu. Korshunov went there with the officer. Sborovskiy soon reported: "I suggest the following... "

Captain Sborovskiy's decision was confirmed.

And then followed the work, which was akin to some great exploit. An officer at the most difficult and dangerous sections encouraged those serving with him and precisely guided their actions. The task set by the State Commission was completed and highly assessed.

By day's end the company party group organizer, Snr Sgt A. Zhuravlev had made more than 10 trips to the accident site in his concrete truck.

"I know we are all tired." He appealed to his comrades. "Who feels that he cannot manage another load?"

No answer was needed. And once again--on the road. In the special zone Aleksandr suddenly heard the engine starting to miss on one of the vehicles. He thought: "It may break down." Zhuravlev stayed with his comrade with the vehicle until the malfunction had been corrected.

And how about this for an example of uncompromising exactingness.

This is from the record of the party meeting for the subdivision [podrazdeleniye]:

"Personal report on communist, officer Ye.F. Seleznev. Resolved: 'for inactivity and a negligent attitude toward his duties, to expel Seleznev from the CPSU ranks.'"

Just a few lines. But they say a lot. Perhaps under different conditions a misdemeanor by a communist would not have resulted in such a severe assessment. But here...

"Here it is the same as being at the front," officer Ye. Nasyrov said at the meeting, "and a special demands are made of communists. Seleznev has sullied this title."

Perimeters of courage. We know the source of this courage: it lies in the essential nature of the builders of communism and their high moral qualities, spiritual richness and nobility. Today, the struggle for Chernobyl, for Pripyat, and for the Chernobyl AES continues. We know that victory will surely come.

## CLEANUP MOBILIZATION

### DESCRIPTION OF CHERNOBYL AFTER NUCLEAR ACCIDENT

#### Control Measures Taken

Kiev LITERATURNIA UKRAYINA in Ukrainian 22 May 86 p 2

[Article by Yuriy Shcherbak: "Strict Inspection", from Chernobyl, Ivankiv, Polesk, Borodyanka and Kiev]

[Text] It is strange, but in my countless medical trips across Ukraine, I had never been in Chernobyl. There was no need for it. Now it came to be.

Together with Deputy Minister of UkSSR Public Health, A.M. Kasyanenko, chief medical officer of the Republic, and V.V. Malashevs'ky, chief physician of the Kiev Oblast Health-Epidemiological Station, we rode down to Chernobyl in order to determine on site the scope of the indispensable health and anti-epidemic measures that must be undertaken until the moment the population returns. There is no doubt that the population will return here. We are wearing civilian clothes and ties, which only causes ironic smiles from the physicians in Ivankiv. "Do you intend to go to Chernobyl dressed like that? They won't know what to do with you. Don't make a spectacle of yourselves."

Thus we need to change into special green uniforms: a jacket and pants made of strong cotton fabr'c, and white medical caps to cover our heads. We are ready to go to the zone. At the check points, those assisting the militia carefully check our passes. A wave of a hand and our car hurries along the empty highway. All around there is spring; everything is green and blooming, while in the villages that we pass there is dead silence; all the people were evacuated outside the borders of the 30-kilometer danger zone.

Before we reached Chernobyl we saw a stork in the fields. Not knowing the meaning of radiation levels, he was standing quietly among the luxurious grasses, serving as an optimistic symbol of life to the numerous journalists who have already filmed this bird and have written about him in newspapers. We physicians were less romantic. Obviously, a bird can survive. However, it is possible that after feeling some sudden weakness he may fold down his wings somewhere... After all, no one knows what dose radiation this bird has received.

In contrast to the heavenly birds, people have to undergo a strict dosimetric inspection. Medical personnel checks this in order that none of those who work at the zone or around it, would receive a dose that is beyond the allowed limits of radiation. Besides individual dosimeters which look like pens with clips and are attached to chest pockets of the jackets, and the small inspection tubes through which one needs to look in order to see the milliroentgen dial, the medical personnel (as well as personnel in other fields)--has complex modern instruments which allow for constant and objective checking for the presence of radiation in the air, in the ground and water. They also check levels of radiation produced by radioactive iodine in people's thyroid glands, liver, in tree leaves, grasses, food products, and especially in milk and meat from the animals that were in the radioactive zone.

"An objective and realistic study of the radiation presence in all the oblasts of Ukraine, not only in the accident zone, is a priority assignment for the medical and epidemiological personnel of the Republic," said Anatoliy Mykhaylovych Kasyanenko. "From the time that the alarm was sounded until today, without exception, all the medical epidemiological stations of Ukraine, from the smallest ones which are in village areas, to the excellently outfitted medical stations of large industrial oblasts are on duty round-the-clock. They are working to maximal capacity and have increased manyfold the scope of research and the number of objects which undergo a strict radiological inspection. Our aim is to prevent theoretically even the least possible chance for the elevated radiation to affect the human organism. We are especially persistent now in controlling drinking water, milk and other food products."

The closer we get to Chernobyl, the more signs there are of an intensive battle that goes on now at the nuclear power plant. In the fields there is numerous machinery waiting for its turn cement trucks, bulldozers, heavy tractors, autocranes, there are piles of pipes and other building materials. At special sites there are soldiers (in green uniforms for protection against chemicals) who wash down with hoses all the vehicles leaving the zone. Intense decontamination is carried out so that the greatest lowering of the radiation level could be achieved. Today the biggest enemy is the dust which settles on the hair and on the uncovered parts of human bodies, on the clothes and shoes, on metal surfaces of vehicles, on tires and tractor treads.

Armored trucks and cement carriers speed along the well-watered main streets. Fire trucks stand in the shade and in front of the rayon party committee office, where the general staff is now. There are Volgas with license plates of various institutions and ministries. Everywhere one can feel the strict regimen of an unusual situation, everything is now subordinated to the one iron logic of the war with the misfortune that has faced us.

At the general staff office we decide all problems very quickly, without any long and complicated agreements and explanations, without the usual chain of resolutions and interinstitutional correspondence--without all the complicated bureaucratic mechanism to which, regrettably, we had grown used to during the "peaceful" daily situations. It is happening in a simple manner--the deputy minister makes the necessary decisions, and immediately they become law and have to be carried out.

Everyone who works at the general staff office, and whom we happen to meet on the street (a cafeteria, a restaurant and a store are opened in Chernobyl) wears a protective uniform such as we have. You cannot tell who is a laborer, who is an academician, and who is a private or an officer. All are equal in the face of the elevated radiation levels. The difference lies in the responsibilities.

In a rather small provincial building with wooden columns which support the roof over a porch, there is the empty Chernobyl Rayon's medical-epidemiological station. One may think that there is nothing for the medics to do here after all the population of the town has been evacuated. There are no cattle nor chicken here; the wandering dogs and cats have been killed; there are no quickly perishable food products. The city is well preserved until better times, the decontamination has been performed. However, the medical station is alive and active. Even if it is a small factor in the total activity taking place in the area around the reactor of the nuclear power plant. Still its function is meaningful and promising. After all, physicians think not only about the present day and its most important immediate concerns, but also see to the needs of the town's future.

We are met by the head of Chernobyl's medical station, Anatoliy Petrovych Mykolayenko. He knows every house, every object in the rayon. One need not wonder--he has been here as chief physician for ten years now, he loves the Polissya nature, which has been bestowing upon people such clean and harmonious happiness... There is nothing heroic in Anatoliy Petrovych's looks--he is not tall, has a rather full kindly face, and calm and unhurried speech. But during the accident, doctor Mykolayenko behaved as a person of high manly courage, honor and professional responsibility; after the alarm was signalled he had set up a continual dosimetric inspection, took part in evacuating the villages which were within the contaminated zone near the city of Propyat and later also evacuated his own Chernobyl. He took his co-workers from the medical station to Borodyanka, and himself returned here, without paying attention to the volume of radiation that he received--which was not small. After all, those who worked right at the nuclear power plant had it much worse.

A.M. Kasyanenko was forced to order doctor Mykolayenko to take a rest and to be examined immediately.



In Ivankov I meet physicians whom I know and whom I met several days before, and about whom I wrote in the preceding issue of LITERATURNIA UKRAYINA. I am happy to hear that Mykhaylo Voznyy, the worker at the nuclear power plant about whom I wrote in that article, has been released from the hospital in good health.

Here, in Ivankov, where most of the personnel who work at Chernobyl spend their nights, we have to delve into matters which may appear to romantics and poets among the writers as routine and dull. However, the great epic prose of life is made up precisely of such "trifles," on which people's health depends. Then we drove to the local steam bath where the construction workers should be bathing now, after returning from Chernobyl. They have stern looking faces and tired looks.

One must admit, that the events related to the accident at the Chernobyl nuclear power plant have made the very important case more acute regarding the reassessment of our whole manner of thinking and all the work under the conditions of scientific-technical civilization together with all its surprises: under extreme conditions there is an increase in speed, with which competent and objectively made decisions need to be taken urgently and need to be carried out. In all respects, there is an increase in the role of reliable information on the situation of the surrounding environment and an all-around evaluation of these often conflicting and varied facts. The human factor is beginning to play a colossal role--such human qualities as courage, decency and professional preparation for a job during an accident situation. Let us be frank: while writing today primarily about people who behaved heroically (I am convinced that we are taking the correct approach, since one should first praise people of honor, conscience and duty), we should not suppress the truth about those, who have teetered during these hard days, and have shown their true faces of cowards and panicky persons. I was told in Ivankov about an aide to the epidemiologist of the rayon medical sub-station, who during the hardest days in May submitted his letter of resignation from the job and disappeared.

However such people were the exception. A great majority of the physicians and medical personnel honorably performed their civic and professional duty.

In the Poleskiy Rayon I had the chance to meet with the two physicians: Arnold Frantsovych Vrublevskyy, who in the peaceful pre-Chernobyl times was a physician-epidemiologist, and his wife, Halyna Pavlivna Vrublevska, a physician-bacteriologist. Both of them, obviously, did not deal with radiological dosimetry in their respective professions. However, after the accident in the neighboring Chernobylskiy Rayon (the shortest distance from Poleskiy Rayon to the nuclear power plant is only 50 kilometers), both the Vrublevskiys, without waiting for any instructions from the top, took it upon themselves to deal with dosimetry. They formed and lead a group performing dosimetric control, taught medical personnel how to use the instruments and set up daily checking of the surrounding environment where most of the evacuees from the town Pripyat were taken. In sixty villages of the rayon, water reservoirs and wells, milk and food product farms, as



well as food establishments were checked. They worked day and night collapsing from fatigue, however soon they were able to determine all the dangerous places where radioactive materials were found. "Devils' tongues," Halyna Pavlivna calls them picturesquely. This enabled the physicians to safeguard from misfortune those who lived within the zone of elevated radiation. Next to them all their co-workers of the Poleska Rayon medical sub-station worked with self-sacrifice carrying out strict inspection of the health and epidemiological state of the rayon.

The chief physician of Kiev's Lenins'kyy Rayon medical substation, Mykhaylo Hryhorovych Melnychenko, works right next to the local Polissians without paying attention to any danger. From April 29th on he stayed within the danger zone, and later he was directed to the Polissya Rayon Medical substation; there he shares with his colleagues his experience which he acquired during the perilous, hot days of May.

Chief physicians of the Borodyanka medical substation, Viktor Fedorovych Shpakovskyy has forgotten when he was last home. He sleeps at his office. Thin and outgoing, he describes the problems which fell upon the shoulders of the rayon medics, in dealing with the evacuation of the population of Chernobyl and the Chernobylskiy Rayon to Borodyanka. Shpakovskiy made an immediate decision based on the dictates of his heart and his conscience: he suggested to his colleagues at the medical substation that they accommodate their evacuated Chernobyl colleagues. So it was done. They live and work together now. There were 15 thousand evacuees. The Chernobyl people came to the Borodyanka area in two long columns. Only within 24 hours almost 700 buses, and over 2,000 trucks passed through the dosimetric posts. However, people were not the only ones to be evacuated. The cattle were also evacuated and the necessary farming items. The medical personnel, while using up all their strength, not only performed dosimetric checking of these columns, but also provided for washing and changing the clothing of the people. And all this had to be done within a very limited time. During these days, the assistant to the medical physician in relation to food hygiene, Olena Volodymyrivna Kravtsova, the driver Anatoliy Makhaylovych Boyarskyy, who was at the wheel for several days and nights, and Volodymyr Ivanovych Slipenko, who is in charge of the decontamination section worked like true heroes; the latter was on duty for 13 days at the public health inspection point, providing order and safeguarding the health of the people.

While rubbing his eyes in fatigue, Viktor Fedorovych states that now it is much easier. All the evacuees are accommodated at the rayon center and in villages, and the local population is taking a thorough medical control over them. The intensity with which we worked at the beginning of May has decreased.

#### Strict Control

Today these words have become the slogan for the work of the medical-epidemiological service of the UkSSR, performing everything possible in order to safeguard the population of the republic from possible harmful effects of the accident at the Chernobyl nuclear atomic station.

However the term "strict control" should be understood in a wider context. It is an inspection not only in the field of radiation, but primarily an inspection of the medical personnel's moral stability, courage and professional preparation. In the face of the tragic trials that have befallen our people, most of the medical personnel of Ukraine has stood with honor.

#### Daily Life Described

Kiev LITERATURNIA UKRAYINA in Ukrainian 22 May 86 p 2

[Article by Oleksander Levada: "On the Streets of Chernobyl", from Chernobyl]

[Text] It is not at all easy to go on a business trip to one's own hometown two weeks after you were forced to leave the place due to the misfortune that has shaken up this land. It is neither easy on your own soul, nor on the planning of such a very complicated and unusual trip.

These days you cannot be in this area without a special assignment and special passes. Even while one is far from the area, there are militia posts on all the roads, while at the border of the 30 kilometer zone surrounding the nuclear station, there is a particularly strict inspection of entry documents. Human safety is the primary goal here, and even though now serious danger is over in relation to people's health on the territory of the nuclear plant itself, as well as at the town Pripyat, which is situated close to it--even to Chernobyl only those are allowed who are active in combating the damage.

And finally here is Chernobyl, the ancient, colorful Chernobyl, on the river Pripyat, the place where only at the end of April I was able to go for walks as much as desired. While now, even if it is just for taking a walk here, one needs not only an entry permit, but also a special pass. And here it is, right in front of me, Pass No. 649, issued by the UYEZD executive committee of the Kiev oblispolkom, and certified with a stamp of the Chernobyl's rayispolkom. It certifies that citizen such-and-such, a writer by profession, is allowed to be in Chernobyl until May 16, i.e., one day.

While still on the road, I thought with excitement: what is the town like now, my quiet, humble, orchard covered Chernobyl, now after the evacuation, after the first hours and days of the alarm? What is life like there now and shall I meet any of the Chernobyl people whom I know? I did meet them. First of all I met them at the headquarters, heading the struggle for the elimination of the effects of the accident at the nuclear power plant. The official commission is located now in the building of the party rayon committee.

There are busy attentive people in special white uniforms constantly milling around; they exchange short remarks, receive their orders and hurry out to the exit. Most of them are now in the reception room of the head of the commission. Among them is the only woman in this building, V. M. Kalynychenko. Until recently she worked at the department of propaganda of Chernobylskiy Rayon party committee. Now, in their reception room, she serves as secretary, dispatcher, courier and hostess of the building.

--Greetings, Valentyna Mykhaylivna!

--O, o! Greetings!

--May I have a few minutes with you?

She looked at those grouped around her desk, and with her arms outstretched out said:

--Perhaps you could catch me on the street somewhere. In about an hour I'll be running over to the next building.

And I did catch her. We talked almost in a telegraphic manner.

--How did you happen to be at this post?

--On the day of the misfortune, I was on duty at the rayon committee. And the following day I was on duty. Then those heading the state commission decided together with the secretary of the rayon committee that I should remain here. Obviously, this was with my own consent.

--Aren't you afraid here?

She smiled:

--Perhaps there is more fear farther away from Chernobyl. Among us here you won't even hear such a word. Just look around, how many people there are. They are doing their job and do not consider themselves to be either martyrs or heroes.

--Do you have a lot of work to do? She smiled more noticeably:

--Just recently one of the directors of our commission said: "Comrades, today we have an unusual situation; this is the first time that we are ending our working day only at midnight."

--Responses from the Soviet people come to the headquarters, and pass through your hands?

--It is an endless stream. Telegrams, letters, postcards. They are all offering their help. Just now I got a telegram from a factory in Dawgaug.

[Dvinsk, Latvian SSR]. They want to send us without charge a truckfull of bicycles for the children evacuated from Chernobyl, and wish to know where to send it. It is a modest offer, however, it touches me, very deeply. Good-bye. I am in a hurry. She waved her hand and ran.

On the other side of the square is the second epicenter of a constant turmoil of people, at the three-storied building of the rayon executive committee. All the rooms there are also filled with personnel liquidating the effects of the accident. At the chief's office is the head of the Chernobylskiy Rayon executive committee, A.P. Shchekin, behind his usual office desk. He is also at an operational meeting, thus we are exchanging phrases only.

--On duty?

--All our personnel are on duty. We provided the city with lighting; the steam bath is working--it is especially needed these days. The medical personnel are working and the sanitary personnel.

As it turned out, it was the medical personnel who have acquired primary importance here today. Of the first order of importance is the war with pollution, with dust on the streets, and again and again with the dust which holds the danger of radiation. By the way, it is in relation to this that an important official of the Kiev Oblast executive committee rode here with me. I would gladly name him, however he took my word that I would not mention him. He is concerned that some people might think that he wants to look like a hero. This is his second trip to Chernobyl this week.

Together with the head of the rayon executive committee, the physician and a group of comrades in special uniforms (I had no chance to be introduced to all of them) began to specify routes for the watering trucks, arrangements for numerous disposal containers and preparations of lists of people responsible for cleanliness in each city block.

You might say that these are routine duties? Undetected? You would be mistaken. In this city where people walk on the streets dressed in special uniforms and respirators on their faces, such duties are evaluated differently. After all, from here to the very fourth reactor at the nuclear power plant there are only 18 kilometers.

And here is another epicenter of traffic of people and cars: it is the building holding today chief personnel in the construction and use of the nuclear power plant. They are headed by the director of the nuclear power plant, V.P. Bryukhanov (who has just recently appeared on television) and the head of construction, V.T. Kyzyma. Using my privilege of an old acquaintance (from the time when I visited the nuclear power plant in order to gather material for a play) I attempt to reach him at least for a few minutes. But it's not easy: there is a new operational emergency team under way, led by the USSR deputy minister of energy. I asked permission to enter.

--What is the most important news for today?

--Temperature at the damaged reactor has come down to 250 degrees. The primary danger is behind us.

--However you have enough problems?

--Of course. Our primary aim is to pack the fourth reactor into an unpenetrable "sarcophagus" forever. For this purpose a special trench is being dug. Coal miners are working at this, as well as subway construction people. Pretty soon their efforts will be completed.

I can't expect a longer interview. This is not the time. And also, I doubt if I could hear something completely new or different from the detailed operational information that is constantly being supplied by our press, radio and television.

Now I would like to communicate in silence with the city itself, its streets, its sidewalks and buildings.

Along the main street dashing stand the stores I know. They are all locked. The courtyards are empty. In the city park there is not a soul in sight.

However the sidewalks are busy. There are only men here: military, militia, they, dressed in special white and blue outfits, look mysterious.

And finally there is also one woman. In a white labcoat, standing near a truck with a red cross on the edge.

--Where are you from?

--Kharkov.

--A volunteer?

--Of course.

--Will you tell me your name?

--Valentyna Hrynenko. I am a paramedic "feldscher". There are about thirty of our Kharkov medics here, so that makes for a lot of names.

In the center of town, at all the available parking places there are numerous motor vehicles, buses, small and large trucks and medical vehicles. The watering trucks are constantly washing down the dust and the dirt off the streets and sidewalks. Along the highway leading to the nuclear plant, cisterns belonging to the chemical personnel are on the move, they are to deactivate the territory of the nuclear power plant.



There are militia posts at all the intersections. The militiamen wear respirators, after all they have to stay there for the whole shift.

To top off my visit I would like to take a look at the river Pripyat, so dear to my heart. I am heading towards it from the top of a hill and I meet three well tanned men, one of them holding a bouquet of flowers. When they come nearer we start to exchange greetings. They are river navigators whom I know from the Chernobyl port, crane operators of the SKPL-100 crane, A. M. Tytarenko, I. H. Dovhopol and A. K. Feltyn.

--What are you doing here?

--With our cranes we are filling diesel engine ships with gravel chips for the nuclear site. Also with sand and cement.

--What is the mood like?

--Like during war. You can be sure that whatever is needed from us we'll do it. If it is needed for our fatherland, obviously we are ready immediately.

And here is the Chernobylskiy Podil, the part of town on the shore of the river. As far as you can see down the very edge of Pripyat, along the Naberezhna Street, there is a wall made about a meter high so that rain water contaminated with radioactivity would not flow into the river.

All the buildings and all the gates are locked. In the courtyards and in the gardens there is emptiness, a frightening emptiness.

And here is my own building, my residence for many years, Naberezhna number 12. It was only seventeen days ago that I left this place, and it feels that the time that passed cannot be measured by weeks or months. My motor boat "Eney" stands immobile and locked-up in the yard; I have not even used it this year yet. It awaits better times. There are locks on the doors of the building and the window shutters are noiselessly closed.

In the garden there is an unusual and painful quiet and motionlessness. The grass has already grown markedly. The pear and apple trees have already passed the blooming stage. Only the forget-me-nots fully open appear in blue with their touching flowers, as if wishing to pronounce in a chorus.

--Do not forget us! Do not forget!

I will not forget.

I walk down the street again and stop at the bank of Pripyat. There are no motor boats, no foaming fishermen's boats with the attached "Vykhors" or "Viterayatas". The river is quiet today. It is in thought and silent. However, as always, its current is strong and incessant as life itself. Thus, soon it shall come alive with many voices, with unending human sounds.

--Until we meet again, Pripyat!

## CLEANUP MOBILIZATION

### FOREIGN DIPLOMATS VISIT UKRAINE

AU271225 Kiev PRAVDA UKRAINY in Russian 22 May 86 p 1

[RATAU report: "Diplomats Visit Ukraine"]

[Text] At the request of the heads of the foreign embassies accredited in Moscow, the USSR Ministry of Foreign Affairs organized a trip to the Ukraine to familiarize them with the progress made in the work to eliminate the accident at the Chernobyl AES.

On 21 May, the diplomats were received in the republic's Council of Ministers. A.P. Lyashko, Ukrainian Communist Party Central Committee Politburo member and Council of Ministers chairman, briefed them on the situation at the AES, and gave an account of what the republic's party, administrative, and economic organs have done to eliminate the effects of the accident, to ensure the safety of the population and the normal functioning of the national economy in the adjacent areas. It was noted that the inhabitants of the 30-kilometer zone were evacuated in a well-organized manner. The people have been received and accommodated everywhere with solicitude. They have been accorded the necessary material assistance and provided with medical services. Measures have been taken to employ them. Having completed the school-year, the children of the evacuated families are now leaving for young pioneers, labor, and recreation camps.

Radiological and laboratory inspection, A.P. Lyashko pointed out, has been organized everywhere in the settlement zones. To provide medical and sanitary services, about 1,000 medical workers have been brought from other Ukrainian oblasts. The state of radiation in the environment is being monitored all over the republic from 188 permanent centers, 39 mobile meteorological stations, from planes and helicopters with dosimetric equipment. Strict control has been established over the quality of foodstuffs and of water in the rivers and subterranean sources. Work is being carried out among the population to explain the situation.

It was emphasized that the situation in Kiev city, Kiev oblast, and the republic as a whole was calm and businesslike. Industry is working steadily, and the spring work in the fields is successfully drawing to an end.

While speaking about the situation directly at the Chernobyl AES, the Council of Ministers chairman emphasized that the utmost was being done to provide everything needed by those engaged in the complex at times dangerous work to eliminate the effects of the accident. Many measures that are being taken are preventive and precautionary in their nature. Their objective is first of all to protect people and their health. The entire republic and the entire Soviet country are taking an active part in this undertaking.

At the same time, A.P. Lyashko called the ambassador's attention to the fact that, in the West, certain circles were continuing to spread conjecture and fables with regard to the accident, were trying to cast a shadow on the Soviet program for utilizing nuclear energy for peaceful purposes, to arouse distrust in the USSR, and to hamper the talks on restricting nuclear weapons. As M.S. Gorbachev noted in his television speech, the nuclear stocks are fraught with thousands of catastrophes much more dangerous than that at Chernobyl. Soviet proposals, including those made on 14 May, are clear and precise. Their objective is to promote international cooperation in utilizing nuclear energy for peaceful purposes, and to stop nuclear tests.

Participating in the conversation were Professor Yu. G. Grigoryev, deputy director of the biophysics institute under the USSR Ministry of Health; N.F. Mikolayev, Ukrainian Council of Ministers deputy chairman; K.P. Boyko, Ukrainian Council of Ministers affairs administrator; V.A. Kravets, Ukrainian minister of foreign affairs; A.Ye. Romanenko, Ukrainian minister of health; N.P. Skrypnik, chief of the republic's Administration for Hydro-meteorology and Control of the Natural Environment; V.A. Zgurskiy, Kiev Gorispolkom chairman; and I.S. Plyushch, Kiev Oblispolkom chairman.

A.P. Lyashko, the scientists, and the specialists who participated in the conversation, answered the questions.

D. Zhulev, ambassador extraordinary and plenipotentiary of the People's Republic of Bulgaria to the USSR, who spoke on behalf of the heads of the embassies, expressed thanks for the interesting and frank account of the AES accident, and wished the Ukrainian SSR government and all Ukrainian people the elimination of the effects of the accident as soon as possible.

The diplomats visited Makarovskiy Rayon. In the executive committee of Fasov village soviet, a conversation was held on the organization of employment and living conditions for people resettled in the rayon from the Chernobyl zone. They familiarized themselves with the operations of the Makarov dairy and sanitary epidemiologic station.

During the conversation and on the oblast tour, the heads of the embassies were accompanied by the leaders of the consulates general of the socialist countries in Kiev.

On behalf of the republic's Supreme Soviet Presidium and government, a reception was given in honor of the ambassadors. On the Soviet side, the participants were V.S. Shevchenko, Ukrainian communist party Central

Committee Politburo member and Supreme Soviet Presidium chairman; A.P. Lyashko, Ukrainian communist party Central Committee Politburo member and Council of Ministers chairman; and leaders of a number of the republic's ministries and departments.

On the same day the guests left for Moscow.

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## CLEANUP MOBILIZATION

### PROCEEDS FROM SPRING FESTIVAL IN KIEV GO TO CHERNOBYL FUND

Kiev PRAVDA UKRAINY in Russian 25 May 86 p 3

[Article by RATAU correspondent under "Kiev Spring USSR Festival of Arts" rubric: "Diary of Events"]

[Text] Kiev Spring brought a musical rainbow into concert halls of the Ukraine's capital. As always, melodies of the fraternal republics heard at the traditional festival of arts found thousands of admirers.

The Virtuozы Moskvы State Chamber Orchestra began its premier in Kiev with a performance, proceeds of which were transferred by the artists to the fund for mopping up the aftermath of the Chernobyl AES [Atomic Electric Power Station] accident. The concert by the collective, which is young but which already has won international recognition, took place to applause.

In discovering the Virtuozы Moskvы Orchestra for themselves, Kiev residents had an opportunity to see the high proficiency of the artists and their director, Vladimir Spivakov, who creates the atmosphere of a musical holiday at concerts and brings to the public the high poetry of creativeness of composers Tchaikovsky, Shostakovich, Bartok and Mozart. They are often helped in this task by various collectives, among them the Moscow Chamber Choir, guest of the present Kiev Spring.

People of different ages can be found at the stage performances of artists from Belorussia, Moldavia and Tajikistan. The Syabry Vocal and Instrumental Ensemble of the Gomel Oblast Philharmonic Society came to the festival with a new program. The program's central composition, "My Great Land," determined its leit-motif. Songs of the Play Vocal and Instrumental Ensemble with the participation of Honored Artist of MoSSR Nadezhda Chepraga were about the native area and its people.

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There was not a day in the past week when buses were not leaving the Kiev State Philharmonic Society building headed for oblast rayons. Almost all artistic collectives taking part in the program of the Kiev Spring All-Union Festival of the Arts made creative trips to workers of Kiev Oblast, performed on the stages of rural clubs, and met with machine operators, vegetable growers and animal raisers.



The Twice-Honored Red Banner Baltic Fleet Song and Dance Ensemble performed on many concert stages during festival days. Artists from Kaliningrad performed folk melodies, ballads about exploits of comradeship in arms and lively sailors' dances in the village of Kopylov of Makarovskiy Rayon, in Belaya Tserkov, in the village of Kovalevka of Vasilkobskiy Rayon, and in the Sovkhoz-Combine imeni 25th CPSU Congress of Obukhovskiy Rayon. The routes of the Stozhary Ensemble from Chernigov, the Sintez Variety Group from Georgia, the Azerbaijan Gyunel Collective, the Honored Transcarpathian Folk Chorus and the Belorussian Toniki went to Mironovka and Kagarlyk, to Boguslav and Ivankov, to Tarashcha and Fastov, and to other cities and villages of the oblast.

Artists of the Kiev Philharmonic Society set up concert groups for serving, on a sponsorial basis, workers of Poleskiy, Ivankovskiy, Borodyanskiy and Makarovskiy rayons, were people resettled from the 30-km zone of the Chernobyl AES now are living and working.

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CSO: 1800/451

## CLEANUP MOBILIZATION

### CORRESPONDENT REPORTS FROM KIEV ON CLEANUP OPERATION

PM111020 Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 10 Jun 86 p 6

[Own correspondent Zh. Tkachenko report: "Kiev Is Working"]

[Text] Kiev--A woman I know, a driver at a Kiev automobile enterprise, told me that her daughter married a Canadian and lives in Canada. The night before the daughter had phoned, she had been in tears, she was unable to believe that her mother had "survived" and had sought reassurance in her mother's familiar tone of voice, she had laughed with joy, but nevertheless had remained unconsolated. "I've been trying to get through to you for 10 days," her daughter had said through her tears. "They are showing such terrible things here. When you turn on the television, Kiev is shown as nothing but a pile of black ruins over which burned, disfigured cripples clamber. Mom, tell me that you are alive, I can't believe it..."

We were standing in Pushkin Square. People brightly dressed in summer clothes were strolling around. A hoarding displayed a poster for the traditional "Kiev Spring" concerts. But my interlocutor's story made the blood run cold. That's the kind of worry that can be caused. Why? It's not propaganda but a kind of sadism. People have been asking themselves this question ever since the grim night of 26 April. But the roulette wheel in this unworthy game in which people's feelings are toyed with has been spun and has gathered momentum. The same black ruins have appeared in the French press, as though according to the same script, albeit a less subtle and cruder one.

What does it matter if Jack (Vilips), correspondent of the CANADIAN TRIBUNE, who has visited here, said: "Our colleagues make us feel ashamed." What does it matter if Brigitte (Rulle), representing the French company Trans Tours here, telephoned Paris with the message: "Everything is fine in Kiev. We are waiting for the next group of tourists."

What does it matter if trust has been poisoned by this inhuman response to a human misfortune. Quite a few nuclear power stations have been built throughout the world. The awesome force of the atom out of control could result in disaster for any people. The rapid development of the technology has outstripped our understanding of the process. History is giving us the opportunity to make a choice.

Here also is the answer to the question "Why?" It is done to hinder. To prevent mankind from reflecting. To channel thoughts in another direction. Using various mouthpieces, they have not simply shed crocodile tears over the Kiev catastrophe but, citing specialists, have told the "survivors" what to eat and drink and how to treat themselves.

"Doctors examined almost 20,000 Kiev residents, including 5,500 children, in the first 10 days after the accident without detecting any changes in their state of health which could be attributed to the effect of radioactive substances," Ukrainian Health Minister A. Romanenko said.

"Everyone who has visited Kiev during this difficult month—from IAEA representatives to foreign tourists—has been struck by the people's calm attitude there to the event. They observe that the city is living a normal life."

Kiev's residents lack nothing: The stores and markets are trading, city transport is running to schedule, senior pupils are taking their examinations, and theaters and cafes are busy in the evenings.

Kiev's doctors deserve praise. More than 1,300 doctors, nurses, laboratory workers, and radiation monitors and 240 ambulances made up the medical task force which descended on the 30-km zone during the first few days. A detachment of Kiev Medical Institute students which assumed the task of looking after evacuated families tested its mettle for the first time in real work. The finest healthcare specialists worked in Chernobyl in relays. Throughout this anxious month regular donors and those who have been prompted to act by the exceptional situation have arrived at medical establishments.

In the first days, as the tactics of curbing the reactor emerged more clearly, Kiev machine builders received an urgent order to produce special emergency grabs. Time was measured in minutes, so to speak. People who had worked the second shift stayed on for the third. Senior foreman T. Keloyev, party organization secretary in No 4 Machine Shop, went to work at a machine tool, as did many engineering and technical personnel. The workers did not leave the shop until the first order had been met. They were followed by others. People worked every holiday and rest day; no one had to be sent for or persuaded.

An unprecedentedly rapid and large stream of resources, materials, and machines is flowing through the city from the entire country. There is also traffic in the other direction.

Resources, people, and time are naturally diverted from demanding plan targets to Chernobyl. That is creating a large additional workload for many collectives. Extra hands would be invaluable. But there are none. Every meter of road from Chernobyl to Kiev is not being merely sluiced down but carefully washed. Hundreds of sprinklers and other machinery converted by skilled workers are being used for this. Vehicles are towing additional tanks [tsisterny] to save on gasoline.

Monitoring is now a ritual. Hygiene control regulations are in force in markets. Shops wash and check every bunch of radishes. Raw materials are monitored for radiation twice, first at the place of production and then in the plant. Monitoring is organized according to the principle of the cycle linking soil, plants, animals, produce, and human beings. For the present vegetables are coming from greenhouses, milk is being triple-checked, and a special monitoring and metering complex has been set up.

Radiation sensors were installed at each of Kiev's four dairy plants within 24 hours. Overnight the Ukrainian SSR Casting Problems Institute cast a special shield for this apparatus to prevent any interference from affecting the readings.

You might think that you could rest easy, but "plausible rumors" do nevertheless appear from time to time. There is only one way to combat them and that is by publicity. Leaders of enterprises and establishments who have shown concern in this way for the psychological climate within their collectives deserve respect. If you call at the Cybernetics Institute and look at the latest report on background radiation, it reads: Atmosphere 0.2 milliroentgens; grass, 0.8 milliroentgens; buildings, 0.02 milliroentgens. The question is clear, people work calmly and even phone acquaintances to put their minds at rest when they have a spare moment.

Everything concerning the fourth power unit continues to be carried out at "top priority." But whereas even 2 weeks ago this meant dropping everything else, today the instruction is: "Ordinary work must not suffer." It has consequently become more difficult and has required that deep reserves be brought into play.

"Without invention you will accomplish nothing here," Nikolay Trofimovich Lutsenko, experienced machine-tool operator at the "Krasnyy Ekskavator" factory, said. "Every Chernobyl order is something that no one has ever made before. It gives both engineer and worker something to rack their brains over."

"Must not suffer" means that innovation must now become an everyday part of production life. The team of machine-tool operators headed by Valentin Aleksandrovich Samar, delegate to the 27th CPSU Congress, has resolved to work to meet the targets of the first 2 years of the 5-year plan by the 70th anniversary of the Great October Revolution. Some 180 teams of excavator builders have also supported this line by taking part in socialist competition.

Today the blueprint, tomorrow the machine is how they put the question.

People appear not to experience fatigue. The Main Administration for Material and Technical Supply's operational staff has requested an additional 10,000 cubic meters of gravel.

"To ensure 3-shift working," V. Novitskaya, driver of a concrete mixer at a Darnitskiy plant, said, "Mariya Zasluzhenaya, Olga Dmitrovskaya, and I have now begun working 12 hours each. To get over the misfortune more rapidly."

That is the main object of the efforts and singlemindedness. And everyone is pulling his weight. Some Kiev subway workers have gone to strengthen the foundations of the reactor, those who remain have been doing the work of two. The power workers at the Tripolskiy GRES have shouldered the main burden of the work of making up the power losses occasioned by the accident.

People rejoice at the mutual understanding, support, and readiness for immediate action. That is the way life is. If anyone asks how things are in Kiev, you can answer with confidence: Kiev is working.

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## CLEANUP MOBILIZATION

### REMOTE CONTROL BULLDOZERS FROM CHELYABINSK OPERATE IN CHERNOBYL

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 15 Jun 86 p 1

[Article by SOTSIALISTICHESKAYA INDUSTRIYA correspondents N. Krivomazov, Chelyabinsk, and V. Sbitnev, Krasnoyarsk, under rubric "According to the Laws of Brotherhood": "Krasnoyarsk to Chelyabinsk to Chernobyl"]

[Text] Radio-controlled bulldozers are being used in the elimination of the consequences of the accident at the Chernobyl nuclear power plant. Today our own correspondents N. Krivomazov, from Chelyabinsk, and V. Sbitnev, from Krasnoyarsk, report how those machines were manufactured.

The first bulldozer went straight from the exhibition to work at Chernobyl. The tour guides had scarcely learned how to discuss the advantages of the radio-controlled T-130, and Chelyabinsk test operators Yu. Potapov, I. Bersenev, V. Rukavishnikov, and N. Gorshkov were already flying from the Urals to Kiev. The new technology, with unusual precision, was included in the program for eliminating the accident. We were told by deputy director of the Chelyabinsk Branch of NATI [State All-Union Scientific-Research Tractor Institute] V. Pavlov, "Remote-controlled technology has already demonstrated its rich capabilities many times. For example, when open-hearth furnaces were being repaired, a radio-controlled bulldozer went into the fiery furnace a couple of hours earlier than the conventional one. Then there was Nizhnevartovsk. There the purpose was something else: a radio-controlled tractor was first sent over impassable swamps. Afterwards, others followed in its trail. There was one more test -- for the skidding tractor. Under forest conditions, the tractor operator could get out of the compartment in order to guide the process of loading and unloading. So, our new technology has already learned how to operate in emergency situations."

Today ten of these tractors have already been flown from the Urals to the Ukraine. The approximate annual need for producing this technology in the country is being refined. As for the operation in the Kiev area, the enterprise that has become the technical base for the people from Chelyabinsk is the Kiev Plant imeni Lepse. Its collective has been guaranteeing in an exceptionally efficient manner the manufacture of additional parts.

The chief concern of the bulldozers from the Urals is the scraping away, from the area close to the fourth unit, everything that will have to be buried together with it. And the second task, also of no small importance, is the clearing of the approaches to the unit for the other equipment.

The tractors are controlled by radio from a combat vehicle at a distance of 100-120 meters. But once it was also necessary to use it in a critical situation. The tractor stalled and it was impossible to use radio to start it up again -- the storage batteries had run down. So A. Boldyrev and M. Chipyshev installed two powerful storage batteries on the combat vehicle, test operator F. Plopp drove up in that vehicle to the stalled tractor, jumped out of the vehicle, connected a jump-start system to the batteries, and got it going again. (Chelyabinsk.)

One Sunday recently, the Vremya television program showed a segment from the area of the Chernobyl nuclear power plant: against the background of the plant, a heavy DET-250 Chelyabinsk bulldozer, with no one in the compartment, was moving by itself. All the operator was doing, at a safe distance, was pushing various buttons on the radio remote-control panel. It was a very impressive scene.

The bulldozer was manufactured in Chelyabinsk, but the entire control system was designed in Krasnoyarsk.

The specialists at the Sibtsvetmetavtomatika Scientific-Production Association had offered the first samples of the bulldozer to the extractive industry as long ago as the 1970's. In 1984 one bulldozer had even been equipped with a remote-control system -- for working in especially dangerous places. With that, the demand for the innovative piece of technology designed by the people at Krasnoyarsk had dried up.

After the Chernobyl accident, workers at USSR Minenergo [Ministry of Power and Electrification] asked the Siberians to manufacture quickly about a dozen sets of equipment for the radio control of heavy tractors.

The deadline that was given was very short -- five days. They asked their colleagues in other enterprises in the city for help. The television-receiver plant manufactured the electric magnets; the Sibelektrostal Plant made a special alloy; the combine plant made the cylinders; and experts at the Krasnash Plant made the hydraulic distribution system. The people did not keep track of the time, and forgot completely about resting. Everyone realized that the most rapid receipt of the radio-controlled technology at Chernobyl depended upon them. They coped with the task in four days. And they took a special flight to Chelyabinsk with what they had made.

On 17 May the first bulldozer equipped with an electronic control system was sent on an IL-76 [aircraft] to Kiev, and the tenth and last one, on 22 May. (Krasnoyarsk.)

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## CLEANUP MOBILIZATION

### ARMY MEN BUILD RAIL TRACK IN CHERNOBYL

PM161449 Moscow KRSNAYA ZVEZDA in Russian 14 Jun 86 Second Edition p 2

[Article by own correspondent Colonel A. Polyakov under the "Chernobyl AES: Test of Courage" rubric: "In the Western Sector"]

[Excerpt] The pace of work to eliminate the aftereffects of the accident at the Chernobyl AES is increasing. Construction of a strong concrete wall, under cover of which the fourth power unit will be assailed, is under way. Preparations are being made to occupy certain population centers after decontamination. An unending stream of various kinds of freight is arriving in Pripyat by river, road, and rail.

Vilcha Station, where rail freight arrives, is in the western sector of the 30km zone. It now reminds one of a frontline camp. Railcars standing on the tracks house the mobile headquarters of various organizations and sub-units, and the unloading areas contain dozens of large-capacity cement hoppers. A guards track-laying railroad battalion commanded by Guards Captain V. Bonadrev arrived here after a long trek. It received its assignment on the spot: Its task is to increase the length of track around the station in order to speed up the handling of freight arriving there.

The servicemen arrived there in the middle of the night, yet within 24 hours had already begun unloading ties, pouring railroad bed, and laying rails.

Early one morning an old man with fishing rods appeared on the track. He stood on the embankment, looked around, and then came up to the soldiers. "Boys, have I gotten lost? There was a pool here yesterday where I fish for carp."

"We have shifted your pool, old fellow," Guards Private O. Rizhemadze answered him cheerfully in Georgian. "It's over there now." The old man looked at the rails, which had not been there the day before, and went off to the fishing spot. He came back in an hour with a bucket containing a dozen large carp. "You see how quickly and carefully we work; even the carp have not been scared," the soldiers joked.

Guards Colonel A. Legkiy, chief of the guards railroad unit political department said: "The work rate here is really very high. The railroad workers have been set a tight schedule. It was confirmed by Lev Alekseyevich Voronin, deputy chairman of the USSR Council of Ministers, and the servicemen committed themselves to shortening the construction time by 5 days."

I have spent more than 1 month in various parts of Kiev Oblast's northern rayons while work to eliminate the aftereffects of the accident has gone on. And I have seen with my own eyes the great labor enthusiasm of those working here. It seems like only yesterday that a green field marked the boundary of the 30km zone. Whereas today there are already buildings, and a transshipment depot and large stations for special handling of equipment are under construction. Until quite recently you could happily chat for 5 minutes at the station civil defense headquarters, where the operational duty officer in charge of work organization is to be found, but now there are phone calls, reports, orders. The pace has increased immeasurably. If a job would take a week under normal circumstances, now it has to be fitted into days, and daily norms are carried out in a matter of hours. It would be impossible otherwise. And this is understood by the digging, construction, chemical industry, and railroad workers without any orders or superfluous words.

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CSO: 1800/490

## CLEANUP MOBILIZATION

### SOVIET AVIATION USED IN CLEANUP

#### Aviation Activity Around Chernobyl

LD292222 [Editorial Report] Moscow Television Service in Russian at 1430 GMT on 29 Jun in its "Vremya" newscast broadcasts a 2-minute report by correspondent V. Lyaskalo on the role of aviation workers in carrying freight and carrying out deactivization work in the region of Chernobyl. He reports from an unidentified "small airfield, designed for agricultural aviation work." Work is very intensive--every 2 or 2 minutes an aircraft lands or takes off, Lyaskalo says.

Video shows a Kamov KA-26 helicopter taking off, AN-2 aircraft taking off. The correspondent says that the AN-2 aircraft are bound for the area of the Pripyat and Uzh rivers to carry out deactivization of the littoral zone from the air. The aviation workers are at work from 0600 to dark. Video shows further shots of AN-2 aircraft taxiing on field, distant shot of other aircraft, too distant for more precise identification.

The correspondent goes on to interview one of the pilots who says he is on his way to the region of the AES for monitoring of radiation levels in the area. He says, "We carry out radiation monitoring of the area every day, and we keep track of the level of radiation there, which, over this period has gone down many times, and at the present time does not present any danger to the lives of the people or to the specialists working there. Nevertheless, it is necessary to check every day." He concludes by saying that he has been working in the area since the first day of the accident and he and his colleagues are feeling well.

#### Planes Prevent Rain

LD291607 Moscow World Service in English 0700 GMT 29 Jun 86

[Text] A whole group of the heavy AN-12 planes are protecting from heavy rain the area near the Chernobyl nuclear power plant where an accident had occurred. Using special equipment and powder-like mixtures, they disperse the clouds and prevent rain which could wash the contaminated soil into nearby rivers and lakes. This practically prevents heavy rain in the 30 km zone. In addition, the Pripyat River which flows in the area is protected by earth embankments from rain streams. Meanwhile the work to eliminate the aftermath of the accident is going on at full speed.

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CSO: 1800/497



## CLEANUP MOBILIZATION

### MINSK SENDS AIRTIGHT TRUCKS TO CHERNOBYL

Moscow IZVESTIYA in Russian 29 Jun 86 p 1

[Interview with P. Amelchenko, chief designer at a Minsk tractor plant, by IZVESTIYA special correspondent M. Shimanskiy, in Minsk: "A Tractor for the Special Zone"]

[Text] Tractor builders in Minsk have filled an important order connected with the cleanup of the accident at the Chernobyl AES: at the "Chyrvonaya niva" kolkhoz in Braginskiy rayon, Gomel Oblast, tests have been conducted on two "Belarus-82" tractors. They have been fitted with airtight cabins enabling the vehicle operators to work under conditions in which there is an increased amount of radioactive dust. The chief designer at the plant, P. Amelchenko, has just returned from the tests.

[Answer] Our work was the result of acute need, Petr Adamovich said. Field work is in full swing at the kolkhozes and sovkhoses. And in the summer the fields and the country roads are full of dust. Particularly now, when the weather is hot and dry. As an accumulator, this dust "collects" a certain amount of radiation. And how to protect the vehicle operator working in the fields? We decided to prepare tractors with airtight cabins.

[Question] What do these vehicles look like?

[Answer] Inside the cabin the designers have installed an extra air supercharger and created excess pressure, which "does not allow" dust to penetrate. Additional filters have also been fitted. The seals for the doors, windows and roof have been improved...

The design preparations and fabrication of the test models were completed in only one week. In the test-production shop they quickly set up a special brigade made up of highly skilled workers. The brigade was led by its foreman, K. Berezovskiy.

[Question] Undoubtedly there were also special requirements when testing tractors operating under these conditions. How were these vehicles checked out?

[Answer] The requirements were really stringent. It had to be that way; we are talking about people's health. And so the tractors were tested twice. First they underwent a preliminary test at the machine-testing station near Minsk. When the Belarus tractors were undergoing the field tests, five powerful tractors, including the T-150, were started up and surrounded them. It was their job to raise as much dust as possible. The test drivers even had to switch their headlights on sometimes, it got so dark. Dust penetration into the cabin was tested using control filters. One was mounted outside the cabin, another inside. They showed that everything was in order.

The next stage of testing took place in Braginskiy rayon, which is located not far from the Chernobyl AES. Here we created all the necessary conditions. For six days, from morning till night the tractors worked in the fields; kolkhoz vehicle operators were at the controls. It became clear that in this kind of cabin the tractor driver is reliably protected and virtually no dust gets in.

What was the chief result of our work? The Belarus tractors with the special cabin can successfully carry out agricultural work in locations adjacent to the Chernobyl AES. A team of specialists from our plant is now in Braginskiy rayon. They are constantly observing how the test models behave under field conditions. And our new task is to produce the first batch of these tractors--100 or 150 units--as quickly as possible.

9642

CSO: 1800/488

## CLEANUP MOBILIZATION

### UKSSR ENERGY MINISTER ON REPLACEMENT OF ENERGY LOSS

Baku VYSHKA in Russian 27 Jun 86 p 4

[Report by TASS special correspondents V. Zhukovskiy and V. Khrustov: "Peak Hour"]

[Text] Kiev--For more than 2 months now the "nuclear furnaces" at the Chernobyl AES have been out. The loss of electric power so essential for the national economy must be made up. How? Using what resources?

We asked V. Sklyarov, minister in the UkSSR Ministry of Power and Electrification, to answer these questions.

The Chernobyl AES went on line in September 1977, he said. Since then the station has generated more than 100 billion kilowatt-hours of electricity. The accident that occurred at Chernobyl has considerably complicated our task; we had been counting on removing obsolete equipment from a number of power installations. But today measures to compensate for these forced losses have already been drawn up and are being implemented.

The solution to the problem is twofold: on the one hand, we must make maximum use of existing power stations, while on the other, we must exercise the strictest regime of economy in all enterprises and organizations.

It is already clear that the Chernobyl AES will not be generating any significant amounts of electric power before the end of the year. The efforts needed to make up these losses are not small. Most of the power--10.4 billion kilowatt-hours--will be provided by extra intensification of operations at thermal power stations in the republic, and also by reducing maintenance times--naturally, without harming the quality of work--and preventive maintenance on equipment.

The situation at the thermal power stations, on which the main load has now fallen, has been significantly complicated. But the labor collectives are making use of all available reserves and are coping successfully with the task that has been set. Stable power supplies are being insured for consumers by the Zaporozhye GRES. Good technical-economic indicators are being achieved there.

The reduction in the consumption of fuel as compared to last year has made it possible to save 11,500 tons of standard fuel. By burning lower-quality coals the power engineering workers at the Pridneprovskaya, Kurakhovskaya, Zmiyevskaya and other thermal power stations are insuring reliable supplies of power to consumers. Capacity at the Zuyevskaya GRES-2 in Donetsk Oblast is being built up at accelerated rates.

Preparations are underway to bring capacity on line at a number of power installations, including nuclear power stations. By the fall the "million" power unit at the Rovenskaya AES will become operational. And by the end of the year another power unit at the Zaporozhye station will be brought on line. But the chief reserve, the minister emphasized, we see in the rational and sensible use of what we have at our disposal today. Therefore, under these conditions particular importance is attached to the extensive introduction of resource-saving technologies in production and greater discipline in the consumption of electric power. Meanwhile, however, not everyone everywhere understands the importance of this task. This year the collectives of enterprises and organizations in Lvov and Crimean oblasts have permitted major overconsumption of thermal energy. The UkSSR Ministry of Land Reclamation and Water Resources has fulfilled only 3.8 percent the plan for saving electric power. Losses are still great because of unproductive use. This year, within the republic the losses of electric power alone have amounted to 493 million kilowatt-hours.

Special plans to save electric power have been worked out at all enterprises in the republic. In particular, they provide for the more extensive use of energy-saving technologies and reduction in power consumption during peak hours on the electricity networks by means of staggering the intervals and the work shifts at a number of industrial enterprises, switching to Sunday work at individual production facilities, enterprises and organizations, and carrying out preventive inspections and equipment maintenance during the evening hours. These and other measures will make it possible to save the amount of electric power that could be generated by a facility with a 2,000-megawatt capacity.

Power engineering workers in the republic, the minister said in conclusion, together with their colleagues from Moscow and Leningrad and a number of the union republics are making every effort to bring the first and second power units of the Chernobyl AES back on line by the fall. The entire country is helping us to do this.

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CSO: 1800/488

## CLEANUP MOBILIZATION

### BRIEFS

**PLANT, FACTORY EQUIPMENT**--Every day many factories and plants in the country dispatch industrial equipment to Chernobyl. As a rule, all the collectives meet these orders ahead of schedule and with a high level of quality, aiming thereby to make their contribution to the work on the speedy liquidation of the consequences of the accident at the nuclear power plant station. Here are some of the reports: Kaluga: The collective of the transport machine-building work has dispatched 70 mobile 4-kw electrical generators to the Ukraine for work in field conditions. This order was met ahead of schedule, in just 10 working days. Novogord: The workers of one of the enterprises in Novogord Oblast have produced standardized prefabricated buildings for use as repair workshops, with a total area of 2,500 square meters, and also a batch of small mobile homes for Chernobyl. In the next few days they will send about another 100 small mobile homes to the Ukraine. Sverdlovsk: At the Promsvyaz Works, telephone exchanges for 1,400 parties have been produced above production plant to enable the completion of telephone links at settlements adjacent to the nuclear power station. They have already been dispatched to Chernobyl. [Text] [Moscow Domestic Service in Russian 0900 GMT 4 Jun 86 LD]

**ENTERPRISES CONTRIBUTION TO CHERNOBYL**--Collectives in factories and plants in many cities around our country are now working on orders for Chernobyl. The Armelektromash Association in Yerevan has sent 150 mobile power stations to the Ukraine. Workers at the Serp i Molot Works in Kazan have manufactured for Chernobyl all the necessary components for an overhead cable car system [Podvesnaya Kanatnaya Doroga]. Several hundred super-strong bits have been sent from Udmurtiya for carrying out drilling work. Families evacuated from the Chernobyl area will be housed in factory-made cottages; 80 wooden-houses units have been sent to the Ukraine from Petrozavodsk. All the orders are being completed ahead of schedule. [Text] [Moscow Television Service in Russian 1430 GMT 30 May 86 LD]

**'URGENT' SUPPLIES TO CHERNOBYL**--The Tyumen Construction Machinery Works is working on an extremely urgent order for Chernobyl. It is for clay grout plants [glinyanny rastvor ustanovki] which are used for building underground facilities. They are an impressive size and will have to be transported on three rail flat bed cars. The first six plants will be shipped to Chernobyl today. [Summary] [Moscow Domestic Service in Russian 0004 GMT 9 Jun 86 LD]



**HYDROCONSTRUCTORS GO TO CHERNOBYL**--A special detachment to Tajik hydroconstructors and power workers comprising 60 people has set off today by air to help their Ukrainian colleagues. The brigade of (Karchevskiy), a republic meritorious construction worker, which is known for its skill and which is from (Krasnaya Prokhodka), will participate in the work on the underground complex in the area of Chernobyl AES together with the metro constructors and miners. [Excerpt] [Moscow Domestic Service in Russian 1430 GMT 23 May 86 LD]

**ROBOT TO CHERNOBYL**--An urgent cargo--a remote-controlled transport robot--has been sent to Chernobyl today by the Izhmash Production Association. This machine was built in only 5 days. It is intended to carry out various tasks in direct proximity to the disabled reactor. [Text] [Moscow Domestic Service in Russian 1000 GMT 4 Jun 86 LD]

**AID TO CHERNOBYL**--Moscow KRASNAYA ZVEZDA in Russian 21 May 1986 Second Edition front-pages under the general heading "Chernobyl AES: Test of Courage" a 250-word unnamed TASS correspondent report headlined "A Record" on how the Sergo Ordzhonikidze Equipment Plant in Dushanbe has produced pipes in record time to help Chernobyl. A 100-word unnamed TASS correspondent report from Cherkessk headlined "Freight from Cherkessk" on how the Cherkessk Chemical Production Association is dispatching polyvinyl butyral solution to help to "considerably accelerate the work to decontaminate the territory adjoining the Chernobyl AES." [Editorial Report] [Moscow KRASNAYA ZVEZDA in Russian 21 May 86 PM]

**EARTHMOVING MACHINES AT CHERNOBYL**--Many enterprises in the country are at the moment filling orders for the Chernobyl AES. There are earthmoving machines for the most complex and laborious work at the training grounds of the production association for manufacture of heavy excavators in Vornezh. Many of them have already been assigned a destination--Chernobyl [Video shows interview with A.G. Korov, general director of the association.] [Korov] We have to send four special machines for work on the so-called wall in the ground [stena v grunte]. This machine can remove soil at a depth of up to 20 meters and carry out special operations. The first machine will be sent off to Chernobyl today, and another one will be sent off every day. [Maksimov] I shall add that ordinary concrete pumps are attached to this earthmoving machine, and a concrete wall really does go into the ground at a depth of 20 meters. Work is being carried over three shifts in the workshops of the association to fill the Chernobyl order. [Text] [Moscow Television Service in Russian 1430 GMT 25 May 86 LD]

**DRILL BIT FOR CHERNOBYL**--By today workers at the Sarapul Dzerzhinskiy Machine-Building Works in Udmurtiya had fulfilled on time an urgent order for Chernobyl AES: 300 drill bits which are required by drillers operating in the station zone have been manufactured at the enterprise. The order has already been dispatched. In order to cope with the task the skilled Kama workers unanimously worked a factory subbotnik and passed the funds earned over to the Chernobyl aid fund. [Text] [Moscow Domestic Service in Russian 0400 GMT 21 May 86 LD]

GIANT CRANE DISPATCHED TO CHERNOBYL--Baku, 7 Jul--A train has left here consisting of 26 freight cars containing equipment for a special caterpillar crane capable of lifting loads weighing many tons. The crane was dismantled on the spot in record time by a team of fitters led by A. Babayev from the "Kaspmorneftegazstroy" Trust. The crane is intended for use at the Chernobyl AES. [By L. Tairov] [Text] [Moscow PRAVDA in Russian 8 Jul 86 First Edition p 3] /8309

CSO: 1800/542

## ENVIRONMENT, HEALTH

### CHRONOLOGY OF SOVIET INFORMATION ON CHERNOBYL

Moscow ARGUMENTY I FAKTY in Russian No 21, 20-26 May 86 p 4

[Report: "How the Public Was Informed"]

[Text] On 26 April the accident occurred at the nuclear power plant.

An authoritative governmental commission for measures to eliminate the damage and ascertain the causes of what occurred begins its work.

As soon as the experts were able to make a "tentative diagnosis," a report on what had happened was sent to the International Atomic Energy Agency (IAEA).

On 28 April governments of various countries were given information available at that time.

Beginning with 28 April information reports from the USSR Council of Ministers are published in Soviet newspapers, daily detailed reports on the situation at the plant are given on radio and television.

On 30 April through 1 May the USSR Ministry of Foreign Affairs received the ambassadors from Britain, Finland, the Netherlands, and the charges d'affaires of France and Austria, who were given thorough explanations with regard to the accident at the nuclear power plant.

On 1 May the Ukrainian SSR representative to the United Nations, G. I. Udovenko, speaking at a plenary session of the General Assembly, noted once again that the Soviet side had officially informed the International Atomic Energy Agency about the accident and the measures taken in regard to the accident.

On 5 May H. Blix, IAEA general director arrived in Moscow, at the invitation of the Soviet government.

On 6 May in Moscow, a press conference for Soviet and foreign journalists was held at the USSR Ministry of Foreign Affairs Press Center.

On 8 May a group of foreign journalists visited Kiev. A. P. Lyashko, chairman of the UkSSR Council of Ministers, answered all questions of interest to the representatives of the foreign press.

On 8 May H. Blix, IAEA genral director, visited Kiev and the area of the Chernobyl nuclear power plant.

On 9 May in Moscow at the USSR Ministry of Foreign Affairs Press Center there was a conference for Soviet and foreign journalists during which the administrators of IAEA expressed their satisfaction with the preliminary information and the positive development of events.

On 13 May a meeting was held between Deputy Chairman of the USSR Council of Ministers B. Ye. Shcherbina and the accredited ambassadors in the Soviet Union of Britain, Spain, Italy, Canada, the Netherlands, Norway, Finland, Sweden, Turkey, and West Germany, the charges d'affaires of Austria, Denmark, Luxembourg, and France, and the representative of the U.S. Embassy. The diplomats were given detailed explanations with regard to the questions relating to the situation at the Chernobyl nuclear power plant.

On 14 May General Secretary of the CPSU Central Committee M. S. Gorbachev, speaking on Soviet television, informed the public about the work that had been carried out to eliminate the consequences of the accident at the Chernobyl nuclear power plant.

All these facts have been taken from the Soviet press. Naturally, we selected only the basic reports from the abundance of diverse information both on the power plant itself and on the measures for eliminating the consequences of the accident. But even these cited facts prove with all obviousness the absurdity and groundlessness of the fabrication about the Soviet side keeping silent on events connected with the accident at the Chernobyl nuclear power plant.

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CSO: 1800/462

## ENVIRONMENT, HEALTH

### MEDICAL CONDITIONS IN REGION

Kiev PRAVDA UKRAINY in Russian 9 May 86 p 3

[Article by TASS-RATAU [Ukrainian News Agency] special correspondents V. Khukovskiy, V. Itkin, and L. Chernenko: "As Though in a Combat Situation: Medics At Work in the Area of the Chernobyl Nuclear Power Station"]

[Text] This is the second day that chief doctor at the Lesnaya Polyana preventive-treatment sanatorium Vitaliy Alekseyevich Melnikov has not had any sleep. The sanatorium has accepted for rest and recuperation a reserve group of workers from the Chernobyl nuclear power station. The operations in the emergency situation and the evacuation of families, of course, had had an effect on people's health. Therefore it is necessary to create all the necessary conditions for them, to have them feel at home here. That was the task that chief doctor gave to the medical personnel. A system of round the clock duty by medical brigades was introduced, and an increase was also made in the workload placed upon the laboratory that would have to make dozens of blood analyses. Changes were also made in the menu in the dining hall, the rooms were made more comfortable, and the area around the sanatorium was spruced up.

That is how Lesnaya Polyana met those who soon would have to continue their watch at the Chernobyl nuclear power station, because, although the reactors have been stopped, it is necessary to maintain the necessary operating mode there. The people who have been assigned such a responsible job must also be in good condition. And that is what the medics are keeping their eye on. The workers at the station have already undergone decontamination and a number of special checks. Regular dosimetric measurements and blood analyses make it possible to check the condition of their health constantly.

"The results of the examination indicate that our patients are completely healthy and after their rest they will be able to go back to their work," the chief doctor feels. On the tree-lined lanes around the sanatorium, the dosimeter operator has become a customary figure. The radiation "patrol" keeps a careful watch on the condition of the air and the soil. The medics also have assimilated this specialty that is new to them. One of the people who have replaced the stethoscope with dosimeter headphones is young medical aide at the Teterevskaya Hospital, Vasilii Korchevskiy. He understands the special responsibility of his mission, and he attentively "listens to" the



readings from his patients, carefully separating the background noises from the slightest deviations. Of course, the sensation is not a pleasant one when you are being "felt" by the dosimeter probe, and you can hear in the headphones a slight crackling noise and you can see a barely discernible vibration in the indicator needle. We were convinced of that by our own experience, when we went through this kind of check! And when the probe touches people's shoes, the crackling noises increase. This is, as it were, the "Achilles heel." Therefore, in the sanatoriums areas the floors are being mopped more frequently, and the roadways are also being washed. On the territories adjacent to the closed zone one can observe an insignificant increase over the usual level of the radiation background, but that increase does not represent any danger to health. The sanitation services keep a constant watch on this.

"In Vasilkovskiy Rayon, for example, radiation stations have been organized. They constantly monitor the condition of the air and soil. The output of the local dairy combine undergoes double checking. An increased workload has also been placed on the medics at the Vasilkovskiy Rayon clinic. The medics there carry out preventive examinations of the people who have been evacuated from the danger zone. Basically, they are all healthy, but, of course, they show the effects of the large stress loads that have been placed on them," the chief doctor at the clinic, Vladimir Petrovich Poluneyev says. "Therefore we must be especially attentive and sensitive to our patients. The doctors who have come from other oblasts help us to examine them and keep them under medical observation. The medics are currently operating as though they are in a combat situation."

More than 1300 doctors, nurses, laboratory assistants, dosimeter operators, and 240 ambulances constitute the medical assault group that is operating in the area of the Chernobyl nuclear power station, we are told by UkSSR First Deputy Minister of Public Health A. N. Zelinskiy. He holds in his hands a report concerning the placement of the evacuated population. Take, for example, the settlement of Peskovka. The people there have accepted more than 2000 people from the danger zone. For providing them with medical services, we have sent 12 medical brigades from other oblasts to help the local medics.

UkSSR Ministry of Public Health constantly receives requests from people wanting to be sent on official business to the area of the Chernobyl nuclear power station, the deputy minister continues. Those requests are made by experienced doctors, medical students, and nurses.

From the very first alarming days, many medical workers entered into the struggle to eliminate the consequences of the accident. One of the first reports about the accident at the nuclear power station arrived at UkSSR Ministry of Health. Steps were immediately taken to render medical assistance immediately to the victims, and to check the condition of the environment. Not even an hour passed before ambulances began rushing toward Chernobyl from Kiev and other cities. Leading specialists from UkSSR Ministry of Public Health -- V. M. Kozlyuk, M. V. Loboda, and others -- headed for the area of the accident.

At the station itself, dosimeter operators measure the radiation level, and doctors examined the patients. Those who required emergency assistance were hospitalized. They were admitted to the Kiev Oblast Hospital and other specialized clinics in the capital of the Ukraine.

The most seriously affected patients -- workers at the nuclear power station and firemen -- were airlifted to Moscow, to specialized clinics of USSR Ministry of Public Health.

Leading specialists came to Kiev from Moscow and Leningrad to provide consultation and give assistance. They included Vice-President of USSR AMN [Academy of Medical Sciences], USSR AMN academician L. I. Ilin; professors L. R. Romanov, Ye. Ye. Gogin, V. V. Kharitonov, O. A. Pavlovskiy; and others. The therapeutic institutions in Kiev and in the oblast have at their disposal all the necessary preparations.

The medics, jointly with other specialists, have begun monitoring the state of the environment and the quality of food products. A large amount of work is being done to provide sanitation information.

At the present time almost half the patients who were admitted to the hospitals after the accident at the nuclear power station have been released. After careful examination and necessary treatment, they are ready to go back to work.

By the efforts of the medics, health is being returned to people. And by the efforts of the party and Soviet workers, and various specialists, scientists, and transportation workers, life is returning to its normal track in the rayons that were worried by the accident.

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CSO: 1800/418

ENVIRONMENT, HEALTH

ENVIRONMENTAL CONTROL HEAD QUESTIONED ABOUT RADIATION IN KIEV

Kiev PRAVDA UKRAINY in Russian 11 May 86 p 3

[Article: "Always Remember: The Atom Is Two-Faced"]

[Text] Kiev in May is beautiful. The chestnut trees are in bloom, the lilac releases its fragrance. Looking at the spring triumph of nature, it is with special sharpness that one recalls the misfortune that came unexpected to this abundant land. How has the accident at the Chernobyl nuclear power plant influenced nature here? What is being done to eliminate the consequences of that accident, and to prevent the pollution of the environment? Those are the questions that TASS and RATAU special correspondents asked Chairman of the USSR State Committee for Hydrometeorology and Environmental Control, Corresponding Member of USSR Academy of Sciences, Yuriy Antoniyevich Izrael, who is currently in Kiev.

[Statement by Izrael]

When the accident occurred, a certain quantity of radioactive substances escaped into the atmosphere. This is a small portion of what had accumulated in the reactor during the time when it was operating. The escape of the radioactive gases and volatile substances occurred for several days and was linked with the high temperature in the reactor zone. At the present time that temperature has dropped sharply. The escape of radioactivity has practically stopped.

At the present time an increase in the radiation level in some regions can be ruled out.

The radioactivity in the atmosphere has disperseded. It remains on the land surface only in individual places that are in direct proximity with the Chernobyl nuclear power plant. The radiation level here has reached 10-15 milliroentgens an hour. By now, as a result of decay, it has been reduced to one-third to two-fifths of its previous level. Although, in conformity with the national and international standards that have been recommended by the International Atomic Energy Agency, the dosages that were accumulating here

were within the admissible limits for the population in the event of accident situations at the nuclear power plant, nevertheless, in order to guarantee complete security and people's health, the decision was made to evacuate people from the 30-kilometer zone. A small rise in the level of the radiation background was also observed in a number of cities in the Ukraine and Belorussia. In Kiev that level constituted 0.3-0.4 milliroentgens an hour, which does not represent any danger to people's health. An insignificant amount of fine radioactive particles, together with the air currents, were carried long distances, and fell on the territory of Poland, Romania, and a number of the Scandinavian countries. A small rise in the radioactive background was observed there, which also was not dangerous to the population.

At a session of the Politburo of the CPSU Central Committee which was held on 8 May, it was noted that a commission and the local party and Soviet agencies are promptly taking the necessary steps to overcome the consequences of the accident. In the zone of the Chernobyl nuclear power plant and the adjacent territory, a large amount of work is being carried out to prevent any damage from radioactive contamination. In particular, in order to preclude or reduce the possibility that any portion of the dangerous substances will wash off into the Pripyat River, embankments are being built up along its banks. In this zone, agencies of Goskomgidromet [State Committee for Hydrometeorology and Environmental Control] and other departments are carrying out a large program of measurements and research with the purpose of studying the radioecological influences and effects.

In connection with the fact that in the zone adjacent to the Chernobyl nuclear power plant an increase has been noted in the radioactivity of the soil, the limits for the carrying out of agricultural work have been strictly drawn. But beyond the confines of the 30-kilometer zone, these operations are being carried out normally.

The quality of the drinking water is being monitored constantly. Samples are taken regularly from the Kiev Reservoir. The results of numerous observations indicate that here the established standards for radioactivity are not being exceeded.

In identifying the isotope composition of the radioactive substances that have been isolated from the damaged reactor, a number of isotopes were detected, including iodine-131, which is dangerous in that it can enter the human organism together with food. The half-life of this isotope is eight days. Strict monitoring has been established over the level of that isotope. A special check is being made of the quality of milk. The checks are carried out twice -- at the livestock farms and at the dairy plants.

Our country's meteorological stations are constantly observing the radioactivity level. For that purpose Goskomgidromet also uses specially equipped airplanes and helicopters. The scientific-research institutes are constantly analyzing the obtained results. An agreement has been reached concerning the regular transmittal of data concerning background radiation from one of the stations of the Ukrainian Administration of the

Hydrometeorological Service, which is situated close to the Chernobyl nuclear power plant, to the International Atomic Energy Agency (IAEA).

In effectively carrying out the observation and constant monitoring of the state of the natural zone in the area adjacent to the nuclear power station, the Goskomgidromet specialists are helped by the most sophisticated equipment. They are armed with the latest spectroscopic measurement apparatus, which makes it possible to determine the isotope composition and to carry out fine spectrometric analysis of radioactive substances. Participating in this operations and in this research are prominent scientists and specialists in the field of geophysics, chemistry, meteorology, and ecology.

What has happened at the Chernobyl nuclear power plant forces us once again to think about what terrible forces are linked with nuclear energy. Even when used for peaceful purposes that energy requires exceptional monitoring, because even an insignificant amount of radioactivity getting into the environment can become a source of a major catastrophe. But its scope can be immeasurable if the gigantic nuclear arsenals are not completely annihilated. It is completely inadmissible even to think of the very possibility that the tremendous amount of radioactivity caused by nuclear explosions could get into the environment. This is completely unnatural both for nature and for man.

The Soviet program for the complete elimination of nuclear weapons is the only realistic path for ridding mankind of the threat that is hanging over its existence, over nature, over the entire planet. At the present time one realizes with special acuity how vitally important and necessary it is to fight for the complete elimination of the nuclear military arsenals, and how necessary it is to have the peaceful cooperation among the scientists and specialists of various countries in deepening their experience in the peaceful use of the atom, and in further understanding its secrets.

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CSO: 1800/460



## ENVIRONMENT, HEALTH

### REPORT FROM SOVKHOZ SUPPLYING MILK TO KIEV

Kiev PRAVDA UKRAINY in Russian 13 May 86 p 1

[Article by N. Logvinchuk, chairman of trade union committee of Khotovskiy Sovkhoz, Kiyevo-Svyatoshinskiy Rayon, Kiev Oblast: "Spring in Khotovskiy"]

[Text] Animal raisers of the Khotovskiy Sovkhoz, which is in Kiyevo-Svyatoshinskiy Rayon, began the 12th Five-Year Plan well. This farm is one of those supplying milk to the Ukraine's capital. Khotovskiy's farms keep some 1,500 cows and an average of 13.3 kg of milk is produced per head today, which is 3.2 kg more than in the very same period of last year.

The collective of animal raisers is attuned to vital work.

"The accident at the Chernobyl AES [Atomic Electric Power Station] inflicted great losses on the state and it is our common duty to cover them," says Mariya Fedorovna Tokarenko, one of the best soykhoz milkmaids. "This means we have to farm even more calculatingly and economically."

Mariya Fedorovna herself fulfilled the pledges of this year by 143 percent and is continuing to build up the milk yield from her group of cows. Another competition winner, Olga Ivanovna Khilkevskaya, also is attuned just as diligently and confidently, as is the entire farm collective.

Two milk plants--Kiyevo-Svyatoshinskiy and City Milk Plant No 3, which is in the settlement of Vishnevoye--receive products of the Khotovskiy farms.

Special posts carefully monitor milk "at the exit" from the farm and a second time on entering the milk plants. There are no grounds for anxiety.

Nevertheless, all precautionary steps are being taken. The herd receives 50-60 kg of bulk greens per head each day, and all this fodder is strictly checked by the posts. The cows are being shifted to summer camps in approximately the very same periods as last year. Spring proved auspicious and it would have been possible to do this even earlier, but the sovkhov zootechnical service decided to wait a little, especially since herd productivity doesn't drop because of this.

And work is in full swing in the fields. Effective competition has unfolded in corn planting. Machine operator G. V. Vladyka is in the lead; each day he covers the planning quota by 1.5-2 times. Tractor operator A. V. Mikhaylov, who is engaged in applying herbicides and working the orchard, is fulfilling norms by 130 percent. All field work is being done in optimal time periods.

## ENVIRONMENT, HEALTH

### ACTIVITY AT KIEV VEGETABLE MARKET

PM191550 [Editorial Report] Moscow SOVETSKAYA ROSSIYA in Russian 16 May 1986 Second Edition carries a 1,400-word article under the "What Is Really Happening?" rubric entitled "What Is Abroad at Kiev Market." Written by special TASS correspondents Vladimir Zhukovskiy, Vladimir Itkin, and Lev Chernenko for "SOVETSKAYA ROSSIYA," the article describes conditions at Kiev's Bessarabskiy market as follows: "Kiev market is today as usual bustling with life. And this while the West is loudly proclaiming that markets in the Ukrainian capital are closed and its stores empty, and Ukrainian bourgeois nationalists are 'predicting' famine in the Ukraine. Food exports from socialist countries are being banned on far-fetched pretexts. Grippled by anti-Soviet hysteria, the bourgeois press and public figures are alleging that these products are contaminated." It continues: "The political and discriminatory character of the import ban is indicated by the fact that it has been applied only to the majority of socialist countries. Real 'contamination,' however, knows no political borders." Returning to the market itself, the article says that "Of course, requisite preventive measures have been instituted in connection with the danger of products being contaminated by radioactive substances. Radiation checkpoints have been set up at the market and hygiene regulations intensified. All products, even flowers, undergo a radiation check before arriving in the trade hall. "It is also pointed out, however, that the 'sale of milk, cottage cheese, and sour cream has been stopped as a precaution. Green vegetables--onions, parsley, sorrel, and spinach--are not being sold either. But spring onions can be freely bought at vegetable stores within the same market. It should also be noted that the prices have remained the same there." The article says that "thousands of Kiev inhabitants" are of the opinion that the "requisite health-safeguard measures have already been taken," "but certain shoppers influenced by ill-informed rumors do come to the radiation control point and ask for their purchases to be checked." It is reported that the needle on the radiation monitoring device "has not deviated once." The work of the laboratory carrying out veterinary hygiene analysis has been stepped up and now operates from 0600-1900 hours, it is reported, and "monitoring has become stricter, products being sent to the city laboratory for analysis at the slightest suspicion." It is also pointed out that "it is necessary to involve sovkhoses and kolkhozes situated on the city outskirts more actively in supplying the people of Kiev with fresh vegetables, especially green vegetables. In accordance with contracts, they are to supply vegetables not only to stores but to markets. Now, when the sale of green vegetables

grown on subsidiary plots is prohibited, this deficit could be made up by products from vegetable farms, whose quality is carefully monitored." As for the claims of damage to Ukrainian agriculture made by bourgeois mass media, the authors say that "in fact it is only in a 30-km zone around the Chernobyl AES that agricultural work is not being carried out. In the rest of the territory work is in full swing."

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CSO: 1800/447

ENVIRONMENT, HEALTH

USSR VICE PRESIDENT OF ACADEMY OF MEDICAL SCIENCES ON RADIATION

Kiev PRAVDA UKRAINY in Russian 16 May 86 p 3

[Interview with Leonid Andreyevich Ilin, vice president of the USSR Academy of Medical Sciences, chairman of the National Commission for Radiation Safety, by PRAVDA UKRAINY correspondent A. Sokol, Chernobyl, Kiev Oblast; date not specified: "Radiation Situation Improving"]

[Text] Traffic to Chernobyl is much more lively today than it was several days ago: things are better, even though the posts are stricter at the 30-km line and there is a square panel with a black background: "Danger Zone. No entry." But members of the government commission and medical personnel continue to be one the other side of the traffic control barrier, in Chernobyl.

USSR AMN [Academy of Medical Sciences] Academician L. A. Ilin continues to work on the first floor of the party raykom. There are doctors and candidates of sciences and clinic physicians working with him. Last time the interview with the scientist was short-lived. This time we sat down at a table.

[Question] Leonid Andreyevich, people are interested in what the radiation situation is at the AES, in the 30-km zone, and in Kiev.

[Answer] The radiation situation causes no alarm. It naturally still is dangerous at the power station. The radiation level is not dangerous outside the boundary of the 30-km zone, let alone in Kiev, and it is steadily improving everywhere.

The 30-km zone serves as a unique barrier which helps compliance with the established regime. Motor transport in particular is monitored. If necessary some vehicles undergo decontamination.

It is common knowledge that there are people working at the AES and in adjoining areas. They are under strict observation. We are using the most up-to-date instruments for this. We monitor sanitary conditions and meals. The safety measures are comprehensive.

[Question] Coming here, I noticed that there are more monitoring posts. How is this explained?

[Answer] It is very good that there are more of them. There must be a barrier to "dirt," even the smallest amounts. Observance of the regime is being rigidified. Roads are being kept in a damp state and we have begun laying additional asphalt on them, especially on the shoulders. There must be as little dust as possible.

Our service sees to it that people working to mop up the accident's aftermath observe maximum caution, that they change overalls, use respirators, and so on.

Standards are being maintained, and with great strictness.

[Question] Tell about them please, about the various tolerances.

[Answer] These are truisms. People know about them.

[Question] You mean the specialists. But how about ordinary mortals?

[Answer] For the AES worker, for example, the norm is five rem [roentgen equivalents] per year.

[Question] Excuse me, but what is a rem? I have heard arguments about which measurement is more correct, the rem or the roentgen.

[Answer] You had better write roentgen so as not to confuse matters. There is no special difference. For example, five roentgens per year is the norm for an AES worker. It means that this level of exposure is constant and doesn't lead to any kind of changes or deviations in a person's state of health. This is normal life.

[Question] And with what indicators does it become abnormal?

[Answer] If an AES worker receives 25 roentgens in a year he is removed from work at atomic power stations for the very same time, for a year. The norms established in our country coincide with international norms; moreover, they are more rigid and have a very high safety margin.

[Question] What else can be said about the tasks of your group?

[Answer] We handle problems of evaluating the radiation situation relative to man and the environment. We are working on a forecast, both of a medical and ecological nature.

[Question] Then please comment on this fact. Yesterday residents who had returned were discovered in a number of villages in Chernobylskiy Rayon from which the population had been evacuated. All of them naturally were sent back, but there was a half-busload of them.

[Answer] I already spoke of the 30-km zone, which is where we are working. But we must not forget for a minute the danger and insidiousness of radiation.

6904/13045

CSO: 1800/451



## ENVIRONMENT, HEALTH

### UKRAINIAN HEALTH MINISTER EXPLAINS HEALTH MEASURES TAKEN

Kiev PRAVDA UKRAINY in Russian 22 May 86 p 3

[Article by UkSSR Minister of Health A. Ye. Romanenko: "Concern for People's Health is Paramount"]

[Text] RATAU--In his statement on Soviet television in connection with the accident at the Chernobyl AES [Atomic Electric Power Station], CPSU CC General Secretary Mikhail Sergeyevich Gorbachev especially emphasized that help for people and concern for their health remain the paramount task, and this guides the republic's health agencies in their day-to-day activities.

I note with satisfaction that the radiation situation is improving consistently and steadily both in the station area and in Kiev and Kiev Oblast.

The present radiation background is determined chiefly by previously accumulated [zanesenny] radioactive substances which settled on the leaves of trees, the roofs and walls of buildings, and on the soil. They are gradually decaying and being washed away, and so the radiation situation has a stable tendency to improve. All monitoring services note a steady improvement in the situation everywhere. This gives me the right to state with all responsibility that there is no danger to the population's health.

The radiation level is within natural background limits in other republic oblasts not directly adjoining the accident zone.

Inasmuch as the air has become cleaner, it is useful and quite safe to periodically air out work and living spaces, especially after a rain, in calm weather and before retiring. Evening strolls and morning exercises can and must be renewed.

Daily studies of water sources which supply the city populace indicate that the water fully conforms to hygienic standards.

But it is still too early to fully abolish the preventive steps which we advised and which are being taken.

We still recommend not swimming in open bodies of water and limiting one's stay on beaches and in the forests and meadows. Refrain for now from gathering wild berries, flowers and mushrooms.

Health agencies now have shifted the principal direction of sanitation and preventive measures to very strict monitoring of food products.

I consider it necessary to inform the residents of Kiev and of the oblast that all products sold through state and cooperative trade undergo strict, systematic control and are safe for consumption. A similar control has been instituted in the markets. Our springtime diet is inconceivable without fresh vegetables, and now there is no need to give them up. In so saying, I would like to reemphasize that the old rule about carefully washing vegetables before consumption should be followed strictly today.

The work of organizing health activities [ozdorovleniye] and sending pupils of the first through seventh grades of Kiev and some rayons of Kiev, Zhitomir and Chernigov oblasts is concluding.

Questions arise about health activities of preschool children. I must say that they will take place as in previous years. Trade union organizations are seeking additional capabilities for broadening the joint relaxation of parents with children in the vacation period.

At the present time agricultural work is proceeding across a broad front in rayons of Kiev, Chernigov and Zhitomir oblasts immediately adjoining the accident site. In this connection I would like to offer some advice of a preventive nature to agricultural workers of these rayons above all.

We recommend a more frequent damp cleaning of work stations and the cabs of tractors and vehicles. Use work clothing which protects the body from dust and wear headgear without fail. Boots are the most appropriate for footwear. Wash with soap and warm water and wash your head carefully each day after the work shift.

Meal hygiene is no less important during field work in these rayons. Eat in a place protected from wind and dust. It stands to reason that before eating one should wash face and hands with soap. In the field, water must be drunk from covered containers.

These recommendations relate equally to work on household and vacation plots. I would like to say that everyone evacuated from the 30-km zone and many living outside it have undergone a detailed medical examination. We have examined more than 200,000 persons, a fourth of whom were children. Such work continues. The people feel completely normal, and the analyses performed also indicate this. Therefore I will reemphasize that there is no danger to the population's health.

I deem it necessary to remind you of the harm of self-treatment. We already have examples where various medicines, primarily iodine preparations, taken on dubious advice led to undesirable consequences. The necessary recommendations should be obtained only from medical personnel.

The republic ministry of health continues to keep all matters involving the people's health under careful control.

6904/13045

CSO: 1800/451

## ENVIRONMENT, HEALTH

### BSSR HEALTH MINISTER ANSWERS QUESTIONS ON HAZARDS

Minsk SOVETSKAYA BELORUSSIYA in Russian 22 May 86 p 3

[Interview by A. Pryanishnikov with BSSR Minister of Public Health Nikolay Yevseyevich Savchenko: "Radiation: According to Rumors and Authoritatively"]

[Text] Because of the accident at the Chernobyl nuclear power plant and of some discharge of radioactive substances into the atmosphere, the editorial office of SOVETSKAYA BELORUSSIYA has been receiving letters and telephone calls containing questions of the most varied nature. We have asked BSSR Minister of Public Health Nikolay Yevseyevich Savchenko to answer several of them.

[Question] Nikolay Yevseyevich, many of our readers are asking for information about the radiation situation in the republic, how it may change, and would like to learn about measures that are being taken by BSSR Minzdrav [Ministry of Public Health] to prevent any consequences that are detrimental to people's health.]

[Answer] First of all it should be noted that under ordinary living conditions a human being receives a certain dosage of radiation as a result of the effect of the natural radiation background, the sources of which are space radiation and radioactive substances that are contained in rocks and the soil. In addition, each of us regularly undergoes medical X-ray and radiodiagnostic examinations (for example, chest X-rays). At such time there are absolutely no harmful consequences for the person's health.

And now a few words about the increase in the natural radiation background as a result of the accident at Chernobyl. It was the most substantial in three rayons of Gomel Oblast (Braginskiy, Khoynikskiy, and Narovlyanskiy rayons), and in areas adjacent to them (Yelskiy, Mozyrskiy, Kalinkovichskiy, Rechitskiy, and Loevskiy rayons). A slight increase in the radiation level was recorded in individual rayons of Minsk, Mogilev, and Brest oblasts.

The inhabitants of the populated areas of the first three rayons of Gomel Oblast that are situated in the 30-kilometer zone were promptly evacuated, with the first people to be evacuated being the children and pregnant women.

The entire population of those rayons has undergone medical examination, including dosimetric monitoring and laboratory study. In necessary instances, special preventive measures using medication were carried out. The persons who were evacuated from the 30-kilometer zone are being constantly monitored and there are absolutely no fears for the state of their health. We are currently taking readings for the entire population of the republic, from the most unfavorable villages to Minsk, and we have not seen in a single instance an increase in the admissible level.

At the present time the situation in the republic is completely normal. Agricultural activities are being conducted in all the rayons of Gomel Oblast. One can observe throughout an expressed tendency toward a reduction in the radiation background, and one can also refer today to its safe level through the entire area, with the exception of the evacuation zone.

[Question] A. Pustoval writes from Marina Gorka, "I visited some Minsk residents whom I know, and I was struck by the over-cautious measures they are taking. We drove there and rang the bell. They opened the door. Then they immediately threw a newspaper under our feet, saying 'Stand on it, and then we'll burn it.' I asked, 'What happened?' There is radiation in Minsk. My friends advise us to drink a glass of water with four drops of iodine in it. However we tried to convince them that no one should take iodine unless it necessary, and that is on the advice of physicians, rather than friends, nothing came out of the discussion..." Currently one hears various kinds of "advice" being given rather frequently. What are the recommendations of experts concerning this matter?

[Answer] I would like to emphasize immediately: in those rayons where that was actually necessary, where real danger existed, the population has been informed and is continuing to be informed. All the recommendations by specialists that pertain to standards of personal hygiene, questions of organizing people's work, everyday living, and recreational conditions, and medical-preventive measures have been made known through the local press, radio, and television, and have been reported in labor collectives and at people's places of residence, and in discussions between medical workers and the public.

As for Minsk and the absolute majority of the other population places in the republic, one can say unequivocally: there has never been here a radiation background that would be dangerous to the population to even the slightest degree. In Minsk, for example, an increase in the natural background was not noted until 28 April. However, it was of short duration and by the end of the same day that level had dropped considerably. Throughout the subsequent days the reduction in the background continued, and at the present time the readings practically correspond to the normal level.

Thus the various rumors about the serious radiation situation in Minsk are completely unsubstantiated. It was apparently because of those rumors that a large influx of Minsk residents poured into Clinic No. 28, where a dosimetric monitoring station was set up to inspect persons who had arrived from the southern rayons, and that led to long queues and, as a consequence, a number of dissatisfied telephone calls to the public-health agencies.



[Question] Similar complaints have appeared in the mail coming in to our editorial office...

[Answer] I repeat: there have been no justifications for having the residents of the city of Minsk undergo special monitoring, and there still are none. We, of course, check everyone who comes in, but this is only a waste of time both for the patients and for the medical workers. The results of the examination of the people of Minsk only confirmed our theoretical computations: the insignificant increase in the radiation background had not had any consequences for their health.

But for those persons who, for various reasons, have left the southern rayons of Gomel Oblast independently, or have left the place of resettlement after evacuation without having undergone any special monitoring, it is necessary to undergo medical examinations. I would like to take advantage of this opportunity to mention this to everyone who was in the 30-kilometer zone: go to any clinic at the place where you are now staying. It is not a matter of any threat to your health, but a mandatory measure of a preventive nature.

And now concerning iodine. Actually, certain iodine preparations, and particularly potassium iodide, to a definite degree can be mentioned as a means that contributes to increasing the organism's resistability in the event of radiation. However, careful analysis has shown that its application was desirably only in the danger zones, and at present there is no need for it. Engaging in self-treatment will cause more harm than benefit, inasmuch as only a specialist can recommend the dosage as applicable to every specific situation. There have been instances of burns in the esophagus and other consequences that are detrimental to a person's health as a result of the incorrect use of iodine preparations.

But it is a different matter with regard to the observance of the rules of personal hygiene, which have not caused anyone any harm under ordinary conditions, not to mention emergency ones. The daily washing of the body, the taking of showers, especially for persons employed in agricultural operations, the keeping of everyday clothing and footwear completely clean, and swabbing out of working and living areas will be beneficial to everyone. For persons engaged in field operations in the southern rayons of Gomel Oblast, we recommend the use of gauze bandages and respirators.

[Question] I would like to ask another question with regard to rumors. Is it true that alcoholic beverages contribute to raising the organism's resistability to radioactive radiation?

[Answer] That is absolute rubbish. It has not been described anywhere by science or confirmed, for example, by practical life, that the use of alcohol is some kind of preventive or protector against radiation sickness. All the rumors about the "beneficial nature" of alcoholic beverages are completely unsubstantiated. Rather, the situation is the reverse, since the harmful influence of alcoholic beverages in instances of radiation is well known.



[Question] Yesterday we had several telephone calls about the ban on sales of spring mushrooms (morels, "strochki" [edible mushroom, similar to morel]) and sorrel at the Komarovskiy Market in Minsk. Readers ask: has this measure been extended throughout the entire territory of the republic? What attitude should people take to other early vegetable crops (onions, radishes, lettuce) that have been grown on their personal plots? Can one use as food such products that have been purchased at state trade enterprises?

[Question] As for spring mushrooms, the ban actually has been introduced for the entire territory of the republic, except for Vitebsk Oblast. The reason for this was that, by virtue of their biological peculiarities, morels and "strochki" possess the ability to a greater degree to accumulate certain radioactive substances than other plants. That ability, incidentally, also manifests itself under conditions of the natural radiation background. Today, when we possess more complete information, one can speak also about the relative safety of those mushrooms on most of Mogilev, Minsk, Brest, and Grodno oblasts. However, it is still better to be over-cautious...

With regard to early vegetables, the situation is approximately the same. We have carried out random studies, but, naturally, we could not take samples from every individual garden. However, taking into consideration the various results, as well as the presence, in certain instances, of an increased content of radioactive substances, especially in sorrel, we do not recommend using these vegetables at the present time as food in fresh form on all territories of Gomel Oblast and the rayons of other oblasts that are adjacent to Gomel Oblast, or in certain rayons of Minsk Oblast (particularly Slutskiy, Soligorskiy, and Lyubanskiy rayons) and Brest Oblast (Stolinskiy, Luninetskiy, and Pinskiy rayons). More detailed recommendations with respect to each specific locality can be obtained at rayon public-health agencies.

The best thing to do is to sell these vegetables to state trade enterprises, where opportunities exist for processing them and for carrying out the special measures to check each incoming batch. Everything that is being purchased today through the stores in the state trade and consumer cooperative systems is completely safe for human consumption.

[Question] Does this also apply to strawberries and other berries that are grown in people's personal plots? Can the fruits and berries be canned this summer?

[Answer] First of all one must keep in mind the area on which the plot is located. If it is situated beyond the limits of the zone indicated above, there is practically no danger.

It will be necessary to return later to the question of canning fruits, since we cannot yet give a simple answer to this question.

The same thing can be said about wild berries and mushrooms.

[Question] Several readers have asked for information about organizing special monitoring for milk and other dairy products to be sold through the state

trade system. And what should be done with the milk from cows that are being kept on the citizens' personal plots?

[Answer] The situation with regard to milk is as follows. Regardless of the republic area where it was produced, it necessarily undergoes dosimetric monitoring. And this is done twice: both on the animal farms, and at the dairy plants. Thus, the probability that milk and other dairy products that could be harmful in any way to the consumer will get into the state trade system has been precluded.

In individual instances it is recommended that no milk be given to children. This, of course, does not attest to the existence in it of radioactive substances in dangerous quantities. Even under ordinary conditions, the attitude that we take to children's food products is based on standards that are ten times stricter than for all other food products.

The situation is somewhat more complicated with regard to the checking of milk from personally owned cows that are allowed to graze freely, because it is impossible to check each and every personal plot. Therefore the checking is being carried out randomly, and wherever contamination of the milk is detected (basically this is in those rayons where the temporary limitation on vegetable crops has been established), we do not yet recommend using that milk as food. It must be sold -- completely! -- to dairy plants where, after processing, it can be used to produce completely safe products -- butter, cheese, etc.

[Question] The summer holiday season is approaching, and many people are definitely agitated by the question, "Where should we go this summer, and what can we do there?" What are the recommendations of Minzdrav on this score?

[Answer] The recommendations are completely simple: go exactly where you already planned to go. We do not see any foundations for any limitations in this regard. Relax in exactly the same places, and in exactly the same way, as usual. Of course, one should not go to those rayons of Gomel Oblast that are adjacent to the 30-kilometer zone, but otherwise you can have a complete vacation, with bathing, sun baths, strolls, and different kinds of games. Of course, one should take care in getting a suntan -- as, incidentally, has always pertained -- because otherwise one could suffer not from radiation, but from sunburn.

People could take their next vacation on the beautiful lakes in Vitebsk Oblast or, for example, at Naroch, which is a favorite recreational spot for thousands of city dwellers...

[Question] Incidentally, as of today, what is the state of the republic's main bodies of water?

[Answer] Absolutely normal. Practically all the open bodies of water, including the territory of Gomel Oblast, are completely pure. Kiev, for example, drinks water from the Kiev Reservoir, and that water comes from the same Dnepr, the same Pripyat which have flowed from us, from our territory, and everything is in order. And so people will be able to bathe, to engage in fishing...

There is also no justification for limiting strolls in the suburbs or for taking children out in the fresh air, with the exception of the eight rayons in Gomel Oblast that are situated in direct proximity to the evacuation zone. Intelligent limitations are desirable here, as is the careful fulfillment of all the rules of personal hygiene and certain other recommendations that are advised by specialists.

In conclusion I would like to re-emphasize: the situation within the entire area of the republic is being stabilized, we are keeping it under constant observation, and there is absolutely no justification for any concern. In most of the rayons the radiation background is at the normal level and, with the exception of those insignificant temporary limitations that we have mentioned, in everything else we recommend an ordinary, everyday way of life.

[Comment] On behalf of all the readers of SOVETSKAYA BELORUSSIYA, thank you for a thorough discussion, Nikolay Yevseyevich.

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## ENVIRONMENT, HEALTH

### RED CROSS OFFICIAL DESCRIBES AID EFFORTS

LD221925 Moscow Domestic Service in Russian 0815 GMT 22 May 86

[Interview on Chernobyl aid funds and assistance efforts with Yuriy Yefimovich Danilov, first deputy chairman of the Executive Committee of the USSR Union of Societies of the Red Cross and Red Crescent, by correspondent Marina Tumanova on the "Time, Events, People" program]

[Text] The spirit of comradeship and generosity of soul, typical of the Soviet people, are more boldly displayed in extreme situations. It was this way when disaster struck at Chernobyl. Thousands upon thousands of people offered their help in eliminating the consequences of the accident and their support for the inhabitants of Pripyat and the adjoining regions. Contributions to the aid fund for the people of Pripyat, Chernobyl, and inhabitants of the neighboring villages flow into the account No. 700624 at the Moscow City Budget Bank. A similar aid fund has been started in Kiev in account No. 904. A sum for which an evacuated family is eligible free of charge at the local Red Cross organization has been determined: 200 rubles.

We have asked Yuriy Yefimovich Danilov, first deputy chairman of the Executive Committee of the USSR union of Societies of the Red Cross and Red Crescent, to tell us about the way in which this work is being organized. Our correspondent Marina Tumanova talks to him:

[Tumanova] Yuriy Yefimovich, let us hark back to the days when the country had only just learned about what happened at Chernobyl. How many people immediately expressed a wish to take part in the rescue work! At the post office, the number of letters and parcels whose address began with the words Kiev Oblast went up sharply.

[Danilov] The Soviet people responded to this universal calamity from the very first day. Various forms of aid were offered. Kiev and Kharkov working people began to hand over money and collect things for the casualties. Following in the footsteps of the Ukrainians, the union republics responded--the Russian Federation above all, and Belorussia, Moldavia, and numerous others.

[Tumanova] At the beginning this process was as it were, spontaneous?

[Danilov] You cannot call it spontaneous, since people knew that it was necessary to send money to aid those affected--only through what channels? Naturally, they turned, first and foremost, to the Soviet Red Cross; and our organization readily responded and took an organizing role of this kind upon itself.

[Tumanova] There already are bank accounts in Moscow and Kiev to which this money can be sent.

[Danilov] Yes, in order to somehow coordinate this we have given the account to the Soviet Red Cross itself and also [its branch] in the Ukraine. No matter where the money comes from, it will be handed over to render aid.

[Tumanova] These contributions keep coming in not just from individual citizens but also from work forces.

[Danilov] The Minsk University students decided to give their bonus, about 1,000 rubles. Many collectives decide to work for a day or two and the money thus earned to send to the Red Cross fund to render material aid.

[Tumanova] It has recently been announced that Volgograd working people also had an initiative of this kind; in addition, days of voluntary work on Saturdays are staged.

[Danilov] Indeed, and it is not just they who made this initiative, a movement has now started everywhere. In essence, you will not find now a single town, a single Kray, nor a single republic where people are not developing this patriotic movement. More than that: the reaction is now irreversible; it is one in which the labor collectives themselves are getting involved more and more, out of the goodness of their hearts and a feeling of duty.

[Tumanova] Regions which most closely adjoin Chernobyl now have the greatest need for the people who wear the Red Cross armbands.

[Danilov] We joined in the organization of the evacuation of those affected to safe places right from the first few hours, so as to have some degree of order. When people were already resettled in safe places, the Red Cross activists began to monitor their health. They carried out checks on houses and visited those who fell ill so as to help them, to give them medicines, and to prepare food. Our voluntary medical orderlies and first-aiders selflessly displayed heroism without regard to how long they worked and assisted.

The Chernobyl tragedy found me and my comrades in New York. What immediately struck one was the slanderous campaign: in the United States, this local incident was portrayed as a global catastrophe in the whole of the Ukraine. When the Soviet people learned about all these things, they are now undoubtedly giving a fitting response.

It is characteristic that this mass patriotic movement was initiated by the people themselves. You cannot call it anything other than the patriotism of



the Soviet people, united in common grief. This is something that is inherent in our Soviet system: when people do not know what it means to view something as someone else's misfortune, when people regard the calamity that took place as one of the whole people, and when they say it is necessary to eliminate this calamity by common work.

/12913

CSO: 1800/450

ENVIRONMENT, HEALTH

UKRAINE FORESTRY MINISTRY OFFICIAL INTERVIEWED

LD252345 Moscow Domestic Service in Russian 1500 GMT 25 May 86

[Special correspondent Vladimir Mikhaylenko report from the "Chernobyl AES area"]

[Text] More and more people wearing the uniforms of forestry workers can be seen among multitudes of specialists solving the problems of how to eliminate the consequences of the accident in the Chernobyl station area. We have seen them amidst airmen, chemistry workers, radiation monitors, and veterinary specialists. Here in Chernobyl we have made the acquaintance of Valeriy Mikhaylovich Brezhnev deputy minister of the Ukraine SSR Forestry Industry.

[Brezhnev] The geographical name polesye itself indicates that it is an area of many forests. Forests occupy half the territory in this 30 km zone, and about 70 percent of it consists of coniferous, pine forests, which are very valuable in economic and ecologic terms.

[Mikhaylenko] We made a short flight over them. They are thick...and young, so it seems.

[Brezhnev] Yes, the forests are man-made here, for the most part. The forests have, first of all, borne the main brunt in terms of pollution. But, one must say, forests are very resistant in this respect. That is why the main task now is to preserve these forests, first of all to prevent any forest fire here, also taking into account the presence of large numbers of people and equipment in this zone, too. Currently, the sections of timber plantations that require help occupy a very negligible area; drying out of the plantations has been detected there, and work to decontaminate them is underway.

[Mikhaylenko] Will there be any need to uproot and destroy any of them?

[Brezhnev] Yes, it will undoubtedly be necessary to fell the plantations in some areas and to bury their organic part. This concerns only those that have been irreparably ruined. They occupy a very negligible area. Also a part of them will have to be felled to solve the problems of building approach lines and various industrial construction sites....

[Mikhaylenko] Is this helicopter working for you?

[Brezhnev] Two MI-8 civil aviation helicopters have come here with parachutists from the RSFSR; they will also be working on aerial patrols over the forests and extinguishing forest fires if necessary.

[Mikhaylenko] I have heard that specialists are recommending you to plow forest cuttings and clearings.

[Brezhnev] Yes, we have already started this work. They are being carried out by forestry enterprises situated in the vicinity of this zone and by those evacuated, too. They have been included already in operating activity and are working fairly successfully.

[Mikhaylenko] And how are animals in the forest behaving?

[Brezhnev] Hundreds of elk, wild boar, roe deer, and other animal species live here. Veterinary and hunter services are keeping a close watch on the condition of animals, and no deviations from normal behavior have been registered in animals. On the other hand, one thing is utterly clear: The forest and its inhabitants must be preserved for the future. Everything is being done now for this purpose. Foresters will do their duty and will solve a number of ecologic problems for this area in the future.

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CSO: 1800/450

## ENVIRONMENT, HEALTH

### UKRAINE ACADEMY OF SCIENCES AIDS IN AFTERMATH TASKS

LD261525 Moscow TASS International Service in Russian 1328 GMT 26 May 86

[Text] Kiev, 26 May (TASS)--TASS correspondent reports:

Much in the work of eliminating the consequences of the Chernobyl accident depends on correct scientific assessment of what is happening. This task is being solved by the Ukraine's Academy of Sciences as well as the country's major scientists.

The Nuclear Research Institute has a special role in the complex situation, said Academician Boris Paton, president of the Ukrainian Academy of Sciences, in an interview with a correspondent. Specialists have tested in detail soil, water, air, and produce. Dosimetric sensors have been installed in all dairy works. Rapid analyses of the chemical and isotope composition of substances have been carried out using dosimetry and nuclear spectroscopy equipment.

Much attention has been devoted to the water supplies for Kiev and a number of population centers in the oblast. Measures are directed at keeping drinking water clean and preventing the contamination of rivers and water reservoirs, said the scientist. Proposals for setting up a prompt and efficient system of monitoring the surface and subterranean hydrosphere of the Dnepr are being implemented.

The issues of setting up artificial geochemical barriers on the migration path of radionuclides are being solved simultaneously. These barriers will be set up on the river Pripyat and the Kiev reservoir. Boris Paton noted that Ukraine's chemists developed in a very short space of time methods of filtering and purifying the drinking water of the Dnepr water supply.

There is still a great deal of work to be done on the recovery of contaminated agricultural lands, noted the scientist. Mechanical operations are being adopted, as well as the use of already known plant strains, and the breeding of special ones which possess properties of neutralizing harmful elements and clearing contamination from the soil.

Hygienic standards and recommendations have been elaborated for the population. They form the basis of the preventive measures against illnesses which can be brought about by radiation contamination of soil, water, and grass.

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CSO: 1800/450

## ENVIRONMENT, HEALTH

### SOVIET PHYSICIAN ON RADIATION SICKNESS, BONE MARROW TRANSPLANTS

Minsk SOVETSKAYA BELORUSSIYA in Russian 27 May 86 p 3

[Interview by E. Gorbunova, APN [Novosti News Agency] commentator, under rubric "At Your Request": "What the Doctors Are Doing to Save the Chernobyl Victims"]

[Text] "The statistics of the consequences of the accident at the Chernobyl nuclear-power station are as follows. During the first hours, two workers at the power station died. They had been in the building there on the night of 25-26 April. Two hundred and four persons who had been on duty at the station and who had been working to put out the fire there were subjected to radiation: they were immediately taken to specialized clinics. A week later another patient died, and 17 were in serious condition. According to the data as of 15 May, 299 persons have been hospitalized with a diagnosis of radiation sickness of various degrees of severity; seven persons have died; and 35 are in serious condition. Is the threat to the life of the patients increasing?", I ask Andrey Ivanovich Vorobyev, corresponding member of the USSR Academy of Medical Sciences.

[Answer] Radiation sickness has its cycles of development. The smaller the dosage of radiation energy that has been absorbed, the later the symptoms (if any) of the sickness will appear. The chief symptom is the destruction of the bone marrow, the blood-making organ that creates leucocytes and other blood cells that neutralize the aggressive action of the microorganisms.

I would like you to understand the following. When it is reported that a patient is in serious condition, that means that an acute period of the sickness -- the destruction of the bone marrow -- is diagnosed. In one or two weeks the situation could become normalized, but during that critical period we treat everyone as a patient in serious condition. Therefore the information about the condition of the patients, which precisely reflects the current situation, changes from day to day.

[Question] What possibilities does medicine have at its disposal to treat radiation sickness?



[Answer] Worldwide medicine does not have any special means that could be used only to treat radiation sickness. Fundamentally speaking, the treatment of radiation sickness is no different from that to which physicians resort when they render aid to patients with problems in the hematogenic system. For example, patients suffering from leukemia. The arsenal of therapeutic means here is extremely vast. Depending upon the stage of the disease and, of course, the patient's individual peculiarities, that arsenal includes the transfusion of various blood components and the prevention or elimination of toxic, septic, or other changes that occur against the background of reduced immunity.

One can also use transplants of donor bone marrow. Experience exists in making such transplants. In particular, shortly before the Chernobyl accident, a person who was invited to a session of the Hematology Department of the Central Institute of Medical Refresher Courses in Moscow was a patient of Professor Baranov, who has been living with transplanted bone marrow that had been taken from her brother. Professor Baranov heads the department where the Chernobyl victims have been undergoing treatment.

[Question] American specialists -- in particular, Professors Gale and Tarasaki -- have come to Moscow. What necessitated this?

[Answer] Under ordinary conditions, physicians around the world resort to bone marrow transplants infrequently -- there are many unresolved problems in this procedure. But now there has arisen the need for bone marrow transplants immediately for many patients. Every physician realizes how difficult this is, even technically, and there is nothing surprising in the fact that offers to help us overcome these difficulties were made to us by our colleagues in various countries -- not only the United States, but also France, Japan, and Italy.

In any catastrophe it is customary to go to people's aid. We all consider to be completely obvious the sending of medical workers and the emergency shipment of medicines and bandaging materials to countries that have suffered, for example, a natural calamity. This is natural and necessary international cooperation. In the present situation it has a special form -- the most authoritative specialists have offered intellectual, methodological aid, and this provides the opportunity to unite the experience in fulfilling the duty that is shared by all physicians -- the saving of the patients' lives.

Professor Gale is a leading specialist on bone marrow transplants in the United States. Professor Tarasaki is the originator of unique methodologies for titration -- the determination of the degree of compatibility of bone-marrow tissue. The bone marrow of the donor must be as compatible as possible, in order not to cause the organism to reject it, as any other foreign substance. In a word, bone-marrow transplants are a very difficult job. They have been carried out on 19 patients who required the procedure.

[Question] I know that this is a very strenuous period for you and that you must return to your patients. But please allow me to ask one more question that has been of great concern to everyone today. In the zone of the

Chernobyl nuclear power station, and even at that station itself, work to eliminate the accident is being carried out. In particular, helicopter pilots have already made hundreds of flights over the damaged building at the power station, in the attempt to extinguish the reactor by smothering it with a kind of pillow made of various substances. Is it possible that these workers will become affected by radiation sickness?

[Answer] There must be no situations of this kind: the length of time that a person spends in the zone of increased radiation is strictly regulated. It is well known that radiation affects each of us every day, without representing any threat to our health. The threat arises when the dosages of radioactivity exceed definite standards. We know what they are and we keep a careful watch to make sure that they are not exceeded. Physicians constantly make medical examinations. After coming off the job, everyone (not only the helicopter pilots) undergoes complete preventive treatment to reinforce the organism.

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CSO: 1800/457

RADIATION SPECIALIST EXPLAINS RADIATION, DECONTAMINATION METHODS

Interview with Radiation Specialist

Moscow ARGUMENTY I FAKTY in Russian No 20, 13-19 May 86 p 3

[Interview with Doctor of Medical Sciences V. Golikov, Head of the Department of Radiation Hygiene, Central Institute for the Advanced Training of Physicians, by V. Romanenko]

[Text] The editors are currently receiving letters in which readers ask us to tell them about the events at the Chernobyl AES. A large number of questions deal with the consequences of the accident at the plant's fourth power unit and possible detrimental effects on public health as a result of the ejection of radioactive substances into the atmosphere. We asked Professor, Doctor of Medical Sciences V. Golikov, Head of the Department of Radiation Hygiene at the Central Institute for the Advanced Training of Physicians, to answer the most representative of those questions.

[Question] Mention was made of natural background radiation at the press conference on May 6, 1986 at the press center of the Ministry of Foreign Affairs. What does that mean?

[Answer] All living things on the Earth are exposed to natural background radiation. The sources of external irradiation are cosmic radiation and natural radioactive substances contained in rocks and the soil. Sources of internal radiation are radioactive isotopes of uranium, radium, radon, etc., which enter the body from foods, water, and the air.

In addition to natural background radiation, the public is exposed to radiation in the course of medical x-ray and radio-diagnostic examinations. Approximately 300 million such procedures are carried out every year in our country in which the average radiation dose is in the order of 135 — 155 mr per year. But thanks to strict controls, preventive, and protective measures, this level of radiation is quite safe for the healthy person. The broad use of x-ray diagnostic methods makes it possible to make diagnoses that are correct 80 percent of the time.

Thus, as the result of the exposure to natural background radiation, including radiation from technological and medical applications, the average total individual dose of radiation obtained by the general public of the USSR, as is the case in other industrially advanced countries, is presently about 400 mr annually. This background is a natural concomitant of our daily lives.

[Question] Certain mass media in the West are attempting to equate the accident at the Chernobyl AES to a nuclear explosion. Are such assertions correct?

[Answer] Of course not.

In the first place, the basic components of a nuclear explosion were absent: a shock wave and emission of light, primary radiation, global radioactive fall-out of long-life non-volatile radioisotopes, and electromagnetic waves.

In the second place, as has been reported in the press, at the time of the accident the reactor had been shut down for planned preventive repairs and was functioning at only 7 percent of its capacity, i.e., at its minimal level.

In the third place, at the time of the accident the chain fission reaction was automatically stopped, so that there was practically no release of dangerous long-life radioisotopes which could have caused the greatest damage and increase in the background radiation. This is confirmed by medical examinations of the victims: They were not exposed to high level neutron radiation.

In the fourth place, a significant portion of the radioactive ejection is composed of the least dangerous noble volatile gases (short-life radioisotopes) that do not accumulate in the body. Approximately one half of the ejection was composed of isotopic iodine — iodine 131 which has a half-life of eight days.

Therefore all of the fabrications put out by the "radio voices" about equating the accident at the Chernobyl AES to a nuclear explosion are clearly groundless and were obviously intended for provocation.

[Question] In many letters received by the editors readers are interested to know how dangerous to public health are the levels of radiation at the plant site and surrounding areas.

[Answer] As is known, the maximum radiation level reached at the plant area in the first few days after the accident was 10 — 15 mr per hour. By the 10th of May the release of radioactive substances practically ceased. Naturally, one would want to know how long the air and soil around the plant will remain contaminated. All the more so, because of all the speculation about this question that has appeared in the Western press.

In this particular case, even without the application of special protective measures, as early as eight days after the radioactive fallout, the fallout dose decreased by one-half. After 16 days it had decreased fourfold, after 24 days it decreased by eight times, after one month by 128 times, and after 80 days the fallout decreased by 1,024 times.

Although the radioactive doses in the area of the plant were within the permissible limits in the event of accidents at AESs, it was decided to evacuate residents from a 30-kilometer zone in order to assure the public's complete safety and health.

In consideration of the fact that 50 percent of the radioactive ejection consisted of isotopic iodine -- iodine 131, precautionary measures were taken to reduce its accumulation in the human body. An increase in the level of radioactive iodine which required medical observation was found only in the area of the plant, but that increase was not critical. There was not a single case beyond the 30-kilometer zone in which the critical level had been reached. Nevertheless, strict measures were instituted to control iodine 131, particularly for milk which was checked twice on the farms at the dairy plants.

We should note that even if cattle, and consequently milk, were contaminated by radioactive isotopic iodine, the processing of this milk into butter, cheese, and powdered milk and their use after 80 days would further reduce the contamination of milk by 1,000 times, i.e., even the dangerous level of radioactivity would be reduced to the safe level.

Understandably, many people who live in direct proximity to the plant are concerned about the contamination of clothing and exposed skin. No health-threatening levels of contamination were recorded in any of the rayons of Kiev, Gomel or Minsk.

I should like to dwell on one more question. In the course of our daily life, we at times forget that large numbers of Soviet and foreign radiologists, astronauts, and nuclear power plant workers are working at elevated levels of radioactivity, relative to natural background radiation. For those persons, the maximum permissible radiation dose is 5 r per year, i.e., ten times greater than the established safe radiation level for the rest of the population (in addition to the background radiation). Twenty-five years of observing Soviet scientists have shown that these elevated levels of radiation background have not caused any harm to persons working under those conditions.

The Medical Research Council in England, upon examining 40,000 nuclear power operators between 1946 and 1979, could not find any evidence to indicate that the operators had a greater risk of developing cancer as a consequence of their exposure to radiation. Not a single person of that category was found to have radiation sickness. In an accidental exposure a single external exposure must be five times greater than the maximum



permissible dose established for such personnel in order to be potentially dangerous and require medical examination and observation. I emphasize that these doses do not cause human illness, but only require medical observation.

Radiation sickness occurs only at doses in the order of hundreds of roentgens.

As was already noted, 204 persons were exposed to radiation at the time of the accident. Of that number 18 persons are in critical condition. They are being treated by Soviet physicians and specialists who have arrived from abroad who are undertaking broad comprehensive medical measures, including bone marrow transplants.

Extensive dosimetric counts taken in the Kiev Oblast and Belorussia have not indicated any significance increases in the radiation level.

#### Interview Continued

Moscow ARGUMENTY I FAKTY in Russian No 21, 20-26 May 86, pp 3,4

[Text] We continue to publish the interview with the Head of the Department of Radiation Hygiene at the Central Institute for the Advanced Training of Physicians, Doctor of Medical Sciences, Professor V. Golikov (See A and F No 20 for beginning)

[Question] Vladimir Yakovlevich, what are our present facilities for protecting the public against radiation?

[Answer] The Radiation Safety Service, headed by Academician P. Burgasov, has been in operation in the USSR for 30 years. Its tasks include the systematic control of environmental radioactivity, levels of radiation exposure for the public, personnel at radiological facilities, and patients undergoing x-ray and radioisotope examinations. A considerable amount of knowledge has been accumulated about the biological action of ionizing radiation. On the basis of that information, the Commission for Radiation Protection of the USSR Ministry of Health under the supervision of Academician L. Ilin has prepared "Standards of Radiation Safety" and other standards documents which have acquired the force of law for the entire territory of the USSR. The reliability of those standards have been confirmed by thirty years of observations by specialists. The documents concisely outline the basic steps to be taken to protect the public against radiation in the event of accident situations at a nuclear electric power plant.

The primary and main task is to halt the release of radioactive substances into the atmosphere and to make a shield made out of neutron-screening and neutron-absorbing materials. Five thousand tons of sand, boron, clay, dolomite, and lead were used to "wall in" the roof of the reactor.

The second, no less important task, is to evacuate the populace from the area of elevated radiation hazard which, in the case of the Chernobyl AES, was done in a 30-kilometer zone around the plant.

The third task is to control the consumption of unsafe foods and water. With this purpose in mind, strict dosimetric readings are being made of milk, fish, and vegetables grown on open ground, and "operation embankment," i.e., the building of banks along the shores of the Pripyat River to exclude or reduce the washout of hazardous substances into the river. A regular check of Kiev reservoirs showed that the radioactivity level was normal at all times. These are the large-scale tasks. As far as individual tasks are concerned, persons residing in the focal area of elevated radiation are advised to remain in closed quarters, to keep their windows closed, and not to hang laundry on the street. For example, the walls of buildings restrain the radiation emanating from areas contaminated by radioactive fallout by a factor of not less than ten times. And if all of the windows and doors are kept closed, practically no harmful substances will penetrate the premises. It is essential to wet mop the area as often as possible so that dust does not accumulate, and open reservoirs should not be used for drinking water.

If dosimetric counters detect radioactive contamination of the skin and clothing, as a rule, the contaminated clothing should be removed so that the radioactive substances do not come into contact with the skin, but if a section of skin is contaminated it should be washed three to four times with warm household soap and the detergents Astra, Novost, Era, and OP-7. An early hygienic treatment of contaminated skin will remove 80 to 90 percent of the hazardous substances. Application of the preparation Zashchita [protection], will remove up to 98 percent of the harmful substances.

If the level of radioisotopic iodine is elevated in the environment, one should use potassium iodide which reduces the amount of iodine 131 in the body by more than 30 times. The combined use of ATP, perchlorates, and imitotravite (a complex of vitamins B, C, P, and amino acids) will significantly enhance the anti-radiation action.

Prophylactic iodine was administered to the public in the entire zone considered to be hazardous. There is no need to take medicinals or undergo other medical treatments in the other areas.

I should particularly like to emphasize that the measures to protect the public against radiation (evacuation, therapeutic measures, administration of drugs) should be undertaken strictly in accordance with the instructions of specialists and only in the zone of high radiation levels. Unjustified measures can be much more harmful to human health than ionizing radiation. In that connection, we believe that the practice of iodine prophylaxis that has been undertaken in some European countries is not substantiated. If one considers the frequency of idiosyncrasy (intolerance) to iodine, such

ostensibly heightened concern about people could result in considerable harm to the public health of those countries.

[Question] The power engineers and builders who are eliminating the consequences of the accident at the Chernobyl AES are carrying out special tasks within the unit where the radioactivity level is high. To what degree is this dangerous for them?

[Answer] A person may be subject to the risk of unfavorable factors at work or at home and in any kind of activity, or even in complete inactivity inasmuch as the latter can also adversely affect a person's health. For example, extensive statistical sampling demonstrates that the probability of dying as a result of a radiation accident at an AES is ten thousand times less than when riding in an automobile, and 100 times lower than the probability of being killed by lightning. Our press is giving the public daily and detailed information about the situation at the Chernobyl AES. In accordance with international and internal national safety standards, a person who gets 25 R in a year's time is dismissed from his post at nuclear plants for a period of 12 months. The power engineers and builders who are eliminating the consequences of the accident have received up to 12 R within a period of two weeks. Even those who are engaged in work at the very epicenter of events, where the greatest danger lies, are not getting life-threatening doses of radiation.

Moreover, special filter and insulating protective equipment is being used in the emergency operations in the radiation zone. For example, the respiratory system is being protected by Lepestok type respiratory masks which reduce harmful doses in the inspired air by more than 99 percent.

Helicopter pilots who were working over the damaged nuclear reactor under difficult conditions were supplied with respirators and special lead seals, and the cabin of the helicopter was coated with lead sheets from within in order to protect against radiation. It was in fact largely due to these people that the situation at the Chernobyl AES was stabilized.

The plastic suits which the personnel at the plant wear provide complete protection against ionizing radiation and practically exclude skin contamination. When wearing such suits, one can even work in the so-called "radioactive section" where the radiation doses far exceed the lethal doses.

Before each shift, the workers change their underwear, hats, socks, shoes, and gloves. All persons are equipped with individual counters which constantly monitor the worker's radiation level. The time of work is strictly taken into account. In addition, for work in the focal areas of radioactive contamination for repair and emergency operations, use is made of automatic manipulators with remote control that are capable of carrying out an enormous range of operations.

[Question] Vladimir Yakovlevich, what are the requirements for organizing medical assistance for a hazardous radiation zone?

[Answer] The activity of medical personnel in emergency situations can be illustrated by a specific example. From the very first days of the Chernobyl disaster medical personnel, along with nuclear plant staff, fire crews, and militia staff, entered the battle to eliminate the consequences of the accident. Two hundred and thirty medical teams were organized, new therapeutic institutions were created, about 100 medical multiple-specialization stations were opened, and about 250 radiation counts were made within a period of two weeks. One thousand three hundred physicians, nurses, laboratory technicians, and radiation counters were sent to the plant site along with 240 first aid ambulances from Kiev and other cities. Twelve medical teams from other oblasts were sent to the village of Peskovka alone, where more than two thousand persons from the danger zone had been placed. By May 9, one half of the persons sent to the hospitals following the accident were discharged. All persons evacuated from the danger zone were given a medical examination and thousands of blood tests were made. Approximately 100,000 persons have already been examined. Once again I emphasize that the basic purpose of the enormous operation was to maintain constant control over the health of the people.

Extensive medical educational work is being undertaken. For example, it has been explained to the population of Kiev that according to preliminary estimates, the background radiation in Kiev will return to normal levels somewhere around May 19, although there has not been and is not to this day any life-threatening radiation since the time of the accident.

Even if the situation today continues for even a month (but it will doubtless get better), the radiation dose would be about 150 mr (including natural radiation). The maximum dose for the public under normal conditions is 500 mr (computed on the basis of annual radiation over the course of 70 years). The existing standards, for example, in the USA for nuclear power plant personnel stipulate that the maximum dose of radiation exposure must not exceed 3,000 mr over a three-month period.

Of course, inhabitants of the Chernobyl region are concerned about the increased danger of oncological diseases and genetic disturbances that might result from the elevated radiation levels. There are no grounds for such concerns. In the first place, these diseases have in fact been recorded, as a rule, only for persons who have been exposed to large radiation doses (more than 50 R), but such levels of radiation have not been observed at the plant site. In the second place, higher risks of developing oncological diseases and genetic disturbances are brought about by "heavy" non-volatile isotopes whose release was prevented at the time of the accident.



In the third place, even in the danger zone (in the absence of protective equipment), it is the thyroid gland that is chiefly subjected to radiation, and this condition is easily diagnosed and treated. The radiation dose on the gonads is less than 500 mr, i.e., lower than the permissible level for the public.

[Question] What are effective measures for decontaminating the areas affected by radioactive substances?

[Answer] Of course, a reliable and long-term insulation of the biosphere from elevated radioactivity is an exceptionally important problem. At the present time extensive decontamination operations for the AES area, the plant itself, buildings, and soil are under way.

At the first stage, it is most important to decontaminate the sections the most affected areas: the reactor and everything around it. Roads should be decontaminated with normal detergents and irrigating machines. Houses and technical facilities should be decontaminated with "radioactive dyes" made out of epoxy resins which immobilize radioisotopes. A new method of soil decontamination was invented in the course of the emergency situation whereby the soil is covered with a special deactivating film. In this way, up to 300,000 square meters of area can be decontaminated in a 24-hour period. Following this treatment, radioactive dust and particles cannot get into the soil or water.

A method has been worked out for sealing the roofs of buildings and installations with liquid glass. The banding of the sewage system has been completed. By the same token, the entry of rain water from the plant into the Pripyat River has been completely blocked.

A "pillow" of liquid nitrogen is being built to protect the ground under the reactor.

The encapsulation of the stricken fourth unit is planned. Later, it will be "buried" under strict safety measures.

In spite of the fact that the radiation level at the plant and surrounding area is still elevated, essential steps are being taken to provide for the safety of all those persons engaged in eliminating the consequences of the accident.

I believe that in the not-too distant future, people will be able to return to this area and continue their normal lives.

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CSO: 1800/463



## ENVIRONMENT, HEALTH

### SOVIET ACADEMICIAN VIEWS EFFECTS OF ACCIDENT

LD282300 Moscow Television Service in Russian 1700 GMT 28 May 86

[Video talk by Academician Valeriy Alekseyevich Legasov, first deputy director of the Kurchatov Atomic Energy Institute; from the "Vremya" newscast]

[Text] I visited the Chernobyl AES a few hours after that major accident took place on 26 April, as a member of the government commission. Frankly speaking, I could never imagine that I would witness such an accident, which was believed to be rather improbable by specialists who are active in power engineering. But it did happen.

Naturally, the situation then and the situation now at the Chernobyl AES are distinctly different. Soviet TV viewers are well aware of that. In the initial period, the basic task facing the specialists was to localize the accident, to prevent radioactive elements from escaping from the destroyed reactor and spreading to an appreciable distance away. And this task had been basically resolved. Today, of course, work is underway on decontaminating the areas which have been affected with radioactive debris. This work is being monitored. It is a difficult job, and it may take a long time in individual areas, but it has its schedule already because the main tasks of protecting water, both underground and river, from the rivers adjacent to the site of the Chernobyl AES, from radioactive contamination, to prevent the spreading of radioactivity through relocation of dust from the affected areas, are being tackled. This, I repeat, is a painstaking and hard job but I have no doubt that the efforts which are being taken there today will eventually lead to the elimination of all consequences of this serious accident. Specialists are now at work at their desks completing their analysis of what happened.

Well, it is clear that a very improbable thing happened, and it could only happen through a combination of a whole series of highly improbable, rare causes. The details are still being clarified but one can say already that these details allow us to take the engineering and technical decisions which will enhance the safety of not only the nuclear facilities. Provided they are observed correctly, they can enhance the safety of any complex technological systems as well. Occasionally, when we in Chernobyl read the ill-wishing remarks in the Western press concerning what was going on, we were just staggered because it is clear to any sensible person that our country, once more going through misfortune, once again tackling the difficult tasks on eliminating the consequences of this accident, is in fact accomplishing its

world mission consistently; that is, enriching the world engineering experience with what we have got on our hands today. And the nuclear engineering of the whole world will be strengthened when the causes of what happened are analyzed, when weak points in nuclear engineering are detected. As far as our own nuclear engineering is concerned, it will undoubtedly be strengthened after it has got over its own tragedy. And it will serve our people in resolving the tasks they are charged with.

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CSO: 1800/450

## ENVIRONMENT, HEALTH

### ACADEMICIAN VELIKHOV WRITES ON NUCLEAR DANGER

PM130740 Moscow SOVETSKAYA ROSSIYA in Russian 3 Jun 86 First Edition p 3

[Article by academician Yevgeniy Velikhov: "We Were Born for Creation"; first two grafs are editorial introduction]

[Text] The editorial staff are receiving a great many letters in response to the rubric "Let Us Protect the Future" and the material in it by our writers: Cosmonaut G. Beregovoy, actress V. Vasilyeva, poet Ye. Yevtushenko, scientist and traveler T. Heyerdahl, and others. The readers themselves are giving thought to how to warm up the political climate on our planet. A. Repin from the city of Borovichi, A. Korovkin from Kishinev, I. Shkolnikov from Zhukovskiy, A. Zharikov from Donetsk, A. Kosyrev from Perm, I. Babnin from the village of Golubevo, and many others write about the need to defend peace.

Continuing the rubric, we present the opinion of Academician Ye. P. Velikhov, vice president of the USSR Academy of Sciences.

I recently returned from Chernobyl, where I worked for 2 weeks. And now I am giving a great deal of thought to the lessons to be learned from the accident at the Chernobyl AES and to what must be done to protect mankind once and for all against the monstrous nuclear threat of which this accident was another reminder. Everyone who has been in Chernobyl during these alarming days and has witnessed the effects of the accident with his own eyes is firmly convinced that everything possible must be done to eliminate nuclear weapons everywhere--on earth and in space. Various discussions have lately been held on this subject abroad. And the majority of scientists in various countries have an understanding attitude to the question of complete nuclear disarmament. But the path leading to freedom from these dangerous weapons is hard. And this means that we must pool our efforts to create a world without nuclear weapons.

Today's "technical" civilization is still quite young. There are people among us who well remember its first, uncertain steps. But already, in the second half of our century, the development of technical ideas has made it possible to destroy all life on earth, and in the eighties this prospect is becoming increasingly threatening.

But our time is also characterized by the creative flourishing of science, a broadening of its "horizon," an increase in its influence on the most diverse spheres of human activity, and the union of scientific disciplines.

The potential of present-day science, which has become a most powerful productive force, has grown to an unprecedented degree. It has proved itself to be capable of: effecting a chain reaction of atomic nuclear fission and thermonuclear fusion; deciphering and describing the dual spiral structure of DNA; and stimulating the formation of sciences at the point where the interests of two or even several scientific disciplines overlap.

There is much to attest that mankind is now living in a "Golden Age" of science. Its successes in the last few decades in the most diverse fields of knowledge are truly imposing. But against this background of impressive development by contemporary scientific knowledge we observe a startling irrationality: Approximately \$1 million is spent on arms every minute in the world. Over the 40 years since the beginning of nuclear weapons development, more than 50,000 nuclear warheads have been stockpiled in nuclear arsenals. Figuratively speaking, every one of us is sitting on a barrel containing 3.5 metric tons of explosives.

But the terrible force contained in this symbolic barrel of gunpowder could serve mankind well if this energy were to be channeled into peaceful aims. It could, for example, give every inhabitant on earth a trip into space.

We are now experiencing the greatest ordeals in our history. As well as the threat of the use of nuclear force, the possibility is arising of the results of development in biology--genetic engineering--also being applied. If nuclear weapons are capable of irreversibly changing man's physical environment on a global scale (including the radial [radialnyy] conditions in the thin layer of the biosphere), molecular biology and genetic engineering could theoretically alter radically the stable system of hereditary information transfer which guarantees the evolution and very existence of life and intelligence on earth. With its experience in the use of nuclear weapons, mankind must not fall into this new trap, or into others which may appear as a by product of scientific progress.

To this day the West has not ceased speculating on the accident at the Chernobyl AES and its consequences. Despite the information provided by the WHO that there is no danger, unobjective evaluations of what happened are still appearing. Attempts are thereby being made to distract people from the real danger for Europe and the whole world. Imagine if one of the cruise missiles in the Netherlands, for example (and that country is still making alot of noise about Chernobyl), should be launched from its territory and hit a reactor at the Chernobyl AES. Scientific calculations show that, even without a counterstrike the radioactive consequences for the Netherlands would be highly dangerous.

Scientists are faced with the task of making mankind aware of the consequences of a nuclear war. Although the effects of a global nuclear conflict cannot be predicted with total accuracy, we nevertheless possess sufficient information to reach a conclusion on the catastrophic consequences of a nuclear war for mankind.

Mankind has entered an era where the knowledge and skillful application of laws are a practical necessity. As man's might increases, so does his responsibility for every step taken. We were born to create. We already know that supremacy over nature lies not in its thoughtless exploitation but in the ability to learn the laws of nature and use them not for evil, but for the good of man.

I would like to stress that the socialist community provides boundless scope for a scientist to be able to remain true to his vocation, his beloved cause, without going against his conscience or coming into conflict with the ideas of humanism. It is precisely a scientifically substantiated evaluation of the real dangers with which mankind is faced, primarily because imperialism is irresponsibly forcing the pace of the arms race, that forms the basis of a realistic plan to free the planet of the burden of nuclear weapons and other types of mass destruction weapons.

As the statement by CPSU Central Committee General Secretary M.S. Gorbachev notes, "when it is a question of preserving peace and ridding mankind of the threat of nuclear war, there can be no bystanders or nonparticipants.... There is no task more urgent, more noble, or more humane than combining all efforts to achieve this lofty aim."

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CSO: 1800/465



## ENVIRONMENT, HEALTH

### IZVESTIYA REPORTS DNEPR RIVER SAFE

LD071545 Moscow TASS in English 1521 GMT 7 Jun 86

[Text] Moscow, 7 Jun (TASS)--From the first day after the accident at the Chernobyl power plant that took place on 26 April to the present, not a single case exceeding the permissible level of radioactive pollution was registered in the water of the Dnepr River, IZVESTIYA wrote today. Samples confirm that the level of radioactive contamination shows a continuous trend of decline, the newspaper wrote with reference to the Ministry of Public Health of the Ukraine.

Answering questions of the readers about the reasons for drilling numerous artesian wells in Kiev, the newspaper pointed out that, by all appearances, there would be no need for Kiev residents to stop drinking the water from the Dnepr and the Desna. However, one should be well prepared for any turn of events. This is why additional wells have been drilled in the city.

A correspondent of the newspaper has been told at the Ministry of Public Health of the Ukraine that people could bathe and use beaches everywhere, including the area of Kiev. Only some basic rules should be observed.

The optimal time to be out in the sun is the morning from 8 am to 11 am. One should not bask in the sun too long. It is recommended to wear a hat or a cap when in the beach, or to protect oneself from the sun with a sunshade. One should also use trestle beds, chaise lounges and rugs which could be found on the beaches. One more rule is added, a rather important one: It is not recommended to play football and volleyball in the beaches at the moment, because the dust is kicked up during the playing. One more thing: It is recommended to eat in the beaches only in special places, also observing the rules of hygiene.

According to the newspaper, water samples are taken every hour in several points up the Dnepr--between the sluice of the Kiev water reservoir and the mouth of the Pripet River which is close to the 30-km zone.

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## ENVIRONMENT, HEALTH

### PRAVDA DENIES 'RUMORS' OF RADIOACTIVE DNEPR

PM111326 [Editorial Report] Moscow PRAVDA in Russian 8 June 1986 First Edition carries on page 6 under the headline "Fishing Trip With a Dosimeter" and the rubric "Chernobyl AES: Echo of Events" a 1,500-word report by special correspondents V. Gubarev and M. Odinets denying that there is any radiation risk to people's health if they swim or fish in the Dnepr River or eat fish caught in it. The report states, in particular: "Unfortunately, there have been many rumors... People say: 'You must not go in the water,' 'the river is poisoned,' 'the fish are radioactive now,' 'you must cut off their head and fins,' and so forth. The origins of these rumors are understandable: Part of the Kiev Reservoir was included in the 30-km zone, large-scale measures are being taken to protect the rivers and the sea against radioactive substances, and the composition of the water is being monitored constantly—all these quite sensible preventive measures are essential, but fear has big eyes and so rumors arose about an unsafe situation on the Dnepr. They spread even to the Crimea and Odessa, and people are all but asking doctors for certificates attesting to the safety of bathing."

The correspondents point out that the Ukrainian SSR Health Ministry has permitted bathing and say that they themselves have just swum in the Dnepr. They continue: "So we give the people of Kiev a good piece of advice: The Dnepr is still beautiful, so don't deny yourselves a pleasure in the present hot weather--bathe for you health!"

The writers go on to say that members of the public will be permitted to fish in the river as of 14 June, when the season starts. They organized a fishing expedition on the Dnepr near the city of Tripolye to test fish for radioactivity, and the result was as follows: "Dosimetric investigations showed no traces of increased radiation either in the gills and internal organs of pike, sheatfish, pike perch, trench, or crucian carp or in their fins and tail."

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## ENVIRONMENT, HEALTH

### BELORUSSIAN MINISTER COMMENTS ON AFTERMATH

PM201030 Minsk SOVETSKAYA BELORUSSIYA in Russian 8 Jun 86 p 4

[Interview with N. YE. Savchenko, Belorussian minister of health, by A. Pryanishnikov under the rubric "At Your Request": "Once Again About Radiation and Safety"]

[Text] Following the publication of a SOVETSKAYA BELORUSSIYA correspondent's interview with N. YE. Savchenko, Belorussian minister of health, ("Radiation: Rumors and the Authoritative Version," 22 May 1986), during which answers were given to a number of readers' questions connected with the accident at the Chernobyl AES, the editorial office has received numerous requests for a more detailed explanation of individual aspects of the topic discussed. N. YE. Savchenko answers readers' questions.

Pryanishnikov: Nikolay Yevseyevich, 2 weeks have elapsed since our last conversation. What changes have occurred in the radiation situation in the republic during this time?

Savchenko: We know from official announcements published in the press that the situation in the area of the Chernobyl AES and the surrounding territory is gradually normalizing. This trend is also observed in those rayons of our republic which were affected by the consequences of the accident.

In Minsk and most other Belorussian cities and oblasts background radiation is practically within the normal limits. Radiation levels are slightly higher in certain rayons of Gomel Oblast, primarily those bordering on the 30-km zone; however, even there the values represent no hazard.

There has been a substantial change for the better in the situation concerning milk and early vegetable crops. On the territory of Vitebsk Oblast none of the milk and vegetable samples showed any radioactive contamination, while in Grodno Oblast occasional, isolated contaminated samples have been found, not associated with any one place, as a rule. The number of contaminated samples has decreased substantially in Minsk, Brest, and Mogilev Oblasts, and moreover the incidence of food product contamination is sporadic and random. In Gomel Oblast the situation so far remains unchanged, although the amount of radioactive substances contained in the samples has gone down.

Pryanishnikov: In recent days there have been persistent rumors of an expansion of the zone from which people have been temporarily evacuated. Figures are being mentioned--40, 50, and even 60 kilometers....

Savchenko: An explanation is called for here. Immediately after the accident it was virtually impossible to effectively ascertain the fluctuation of radiation levels over the whole territory surrounding the AES. Therefore it was decided to evacuate the population from a zone with a 30-km radius. This decision was based not only on the actual background radiation on this territory but also on the possible recurrence of an emission of radioactive substances into the atmosphere, which had to be taken into account.

Now that the situation at the station has normalized and detailed results of radiation measurement studies are available, the picture is much clearer. Today we know that even inside the 30-km zone there are sufficiently clean settlements and villages quite suitable for habitation and the question of people returning there has already been raised. And conversely, at individual population centers bordering on the zone the same radiation levels have been registered as inside the zone. In these cases the necessary measures have to be adopted to avert the threat to the health of the people living there.

Thus it is not a question of some kind of expansion of the evacuation zone but of operational measures taken in accordance with the prevailing situation.

Pryanishnikov: Can the Ministry of Health add anything to the recommendations which were published in SOVETSKAYA BELORUSSIYA?

Savchenko: The recommendations remain as before: Careful attention to personal hygiene, especially in jobs connected with dust and especially in those parts of Gomel Oblast which I mentioned earlier; there is a need to keep living quarters clean and to observe all local recommendations. Where temporary restrictions on the consumption of milk and vegetables obtained by citizens from their personal plots have been announced, people must refrain from using these products as part of their diet. This precautionary measure applies once again mainly to Gomel Oblast. And although this does not mean that in 100 percent of cases products are contaminated with radioactive substances, in view of the complexity, or rather infeasibility, of daily checks in every specific case it is better, meanwhile, to be careful.

Pryanishnikov: Some readers are asking why personnel in rayon medical and epidemiological stations refuse to check people's vegetables and other food products?

Savchenko: In effect I have just answered this question. Can you imagine what would happen if everyone brought their onions, milk, or sorrel? There is not enough manpower, technical facilities, nor time to check everything. And, in general, this is not even necessary. Spot checks have been carried out and are being carried out in every rayon, and where a contamination hazard has been registered the population has been informed. And where no restrictions have been announced, all products from personal plots can be used in people's diet.



We will proceed in the same way when working out recommendations for the use of canned vegetables, fruit, and so forth produced this summer.

Pryanishnikov: Many readers want to know whether radiation contamination checks have been organized at kolkhoz markets, and if so, in what form? They want to know in particular if it is safe to buy, for instance in Minsk, strawberries and other berries and also vegetables which have begun arriving on the market. After all, they may well have been grown somewhere where soil contamination was at its highest, and, according to certain Minsk inhabitants, there are no special checks at the Komarovka market.

Savchenko: The readers who have written to the editorial office about the absence of radiation monitoring checks at the Komarovka market are misinformed. Both in Minsk and in the republic's other cities these checks are being carried out. They are organized by subdivisions of the Belorussian SSR State Agroindustrial Committee and health service organs and all crop and livestock products are subjected to them, regardless of their place of origin. Every trader receives a radiation check certificate, and the customer can demand to see it.

We have checked on the organization of radiation monitoring at the Komarovka market. Everything that is being sold there now can be bought without restrictions.

On the other hand, it is not advisable to buy from people who have no permission to sell, nor those who set up all kinds of stalls near shops, at stations, or other places.

Pryanishnikov: We have received a number of questions from rayons where people have been advised, for the time being, not to give milk distributed through the state network to children. Readers are asking whether, in these cases, it is safe to make cream cheese and kefir from this milk to feed to children?

Savchenko: In general, the level of contamination decreases several-fold when milk is processed. However, as it is children who are at stake, I must answer unequivocally, no, this should not be done.

Pryanishnikov: What measures have been adopted in the organization of food supplies for children in the rayons where the milk situation is most unfavorable?

Savchenko: First, in cases where it is possible to obtain totally uncontaminated milk, it is dispatched above all to children's dairy kitchens. And second, we have intervened more actively in the distribution of children's dried milk products and condensed milk and, according to information in our possession, these are now available in sufficient quantities in the rayons in question.



If, in some places they are not on sale, people are advised to address themselves to Belorussian Ministry of Trade organizations, which are obliged to resolve these questions.

Pryanishnikov: During our last conversation we said that all the republic's lakes, ponds, and rivers were clean. Nonetheless, certain people still have misgivings: Is it safe to fish this summer, they ask? Or will the many thousands of people who engage in this fascinating pastime have to leave their tackle at home?

Savchenko: It is difficult to answer this question unequivocally without taking specific circumstances into account. Monitoring of the state of water reservoirs and checks carried out on fish indicate that it is not necessary to introduce restrictions on fishing beyond the confines of Gomel Oblast. As for the lower reaches of the Dnepr, Sozh, and Pripyat (I mean the lower reaches on the territory of our republic), there have indeed been cases where fish showed a certain amount of contamination with radioactive substances. It is possible that these finds were anomalous, but bearing in mind that this has not been ascertained, people are advised to refrain from fishing there for the time being. More specific recommendations can be obtained from rayon hunting and fishing associations.

Pryanishnikov: In the first few days after the accident a number of inhabitants of the 30-km zone were hospitalized, as is known. Could you tell us something about the treatment they are undergoing? And also what is the state of their health now?

Savchenko: It is true that a section of the population of the 30-km zone and some other rayons was hospitalized. Fortunately, there has not been a single case of serious illness in connection with the increased level of radiation. Most people stayed in a hospital or clinic for 5, 6, or at most 7 days. To date almost all of them have been discharged after checkups and preventive medical treatment, where necessary. We have no fears for their health at present.

An insignificant number of people are still hospitalized. These are mainly people with ailments that they either did not know about, or knew about and ignored, and that the checkups revealed. And they are now being treated not for "an overdose of radiation"--as is being rumored here and there--but for quite "common," "ordinary" diseases, so to speak.

Pryanishnikov: Nikolay Yevseyevich, you will pardon me for saying this, but it seems to me that a certain amount of the blame for the circulation of all kind of rumors also falls on medical workers. In the course of the past month I have on several occasions heard most absurd "advice" and "recommendations" from doctors and nurses in my acquaintance....

Savchenko: Unfortunately, this does happen in individual cases. The information that is given comes from people with inadequate theoretical and practical training in this area. It is, of course, not advisable to trust casual advice of this kind. Any questions that may arise should be discussed with the sector physician of a given housing area. Only a specialist is qualified to give exhaustive advice.

Pryanishnikov: Can you tell us about the organization of summer vacations for the children who live in the southern rayons of Gomel Oblast and the rayons of other oblasts where the most substantial background radiation has been registered?

Savchenko: At present practically all children from the three rayons of Gomel Oblast--Braginskiy, Khoyniksiy, and Narovlyanskiy--and certain other rayons have been evacuated and placed in pioneer camps on the territory of other oblasts in the republic. Zubrenok, the Belorussian Artek as it is known, the best children's sanatoriums and rest homes, and some of the sanatoriums for adults have been reserved for the young inhabitants of Gomel Oblast. All the preconditions for a good vacation are provided for the children at these places. And I would like to stress here: "vacation" and not "treatment," as some people perhaps assume. The children have been evacuated not because they were subjected to a certain dose of radiation and need to be treated now. Something else is more important. First of all they have been subjected to great psychological stress, they have experienced relatively high nervous tension in connection with the extreme situation with all the consequences that that entailed. They simply need to calm down, build up their strength, and forget the anxieties and worries which they experienced together with the adults. And in this situation a change of air, new acquaintances, and new impressions will doubtless have a beneficial effect.

As for the summer vacations of children in other parts of the republic, the organization hardly needs to differ from what was done in previous years. It is a question of completely normal good vacations, and this fully applies also to the adults. Life is returning to normal and there is no reason to speak of serious restrictions.

Pryanishnikov: Thank you, Nikolay Yevseyevich, for your candid replies.

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## ENVIRONMENT, HEALTH

### CHERNOBYL'S POLITICAL LESSONS: POLITICAL COMMENTARY

Minsk SELSKAYA ZHIZN in Russian 17 May 86 p 3

[Editorial by political correspondent Vladimir Katin: "A View of Events: The Political Lessons of the Chernobyl Accident"]

[Text] What happened in Chernobyl is, of course, a misfortune. But after all, lessons can be extracted from tragedies as well as from achievements.

A dual lesson has been drawn from this event in our country: with regard to nuclear-power plant safety, which remains a serious problem for the whole country, and with regard to foreign political reaction. Many governments, organizations and citizens of various countries sent works of sympathy to the USSR. This meets the standards of civilized society in a humane and humanitarian manner. For us, the indisputable lesson of Chernobyl, noted in this regard by USSR CPSU Central Committee General Secretary M. S. Gorbachev, appearing on Soviet television, was that under conditions of the further development of the scientific and technical revolution, questions of the reliability of equipment and its safety, and questions of discipline, order and organization, acquire paramount significance.

In the practical sphere, the Soviet Union is proposing a program for seriously expanding collaboration within the framework of the International Atomic Energy Agency [IAEA]. In particular, the idea is advanced of setting up an international mechanism for the purpose of rapidly rendering mutual assistance when dangerous situations arise. A highly authoritative conference could be convened in Vienna under the aegis of the IAEA for the discussion of a whole range of issues. The USSR is for whatever will increase the role and capability of this unique organization, which was created in 1957, since its resources and staff do not correspond to the level of development of modern nuclear power. Furthermore, the United Nations and its special institutions must be included more actively in measures for ensuring the safe development of peaceful atomic activity.

In the West, the accident at the AES was intentionally and tendentiously used for the purpose of whipping up hatred toward the Soviet Union and for undermining the atmosphere of trust and cooperation.

The experience of these days has demonstrated that antisoviet hysteria is organized and directed from the United States. And the issue here is not the accident at the nuclear plant at all. Militarist circles in the United States understand that world public opinion decisively requires the ending of nuclear testing and the complete elimination of nuclear weapons. The Soviet Union is also called to this. It is precisely here that real springs streaming out a flow of lies, forgeries and jugglings of facts are concealed with regard to the accident at the Chernobyl AES.

In this regard, the question naturally arises: can the United States be trusted?

This question did not arise overnight. There has been a multitude of instances when the United States violated its own obligations, agreements, conventions and treaties signed by them themselves. For example, Washington has repeatedly flouted the United Nations Charter. A recent example of that is the aggression against sovereign Libya. The United States has also violated the Concluding Act of the Helsinki Agreement more than once.

The events at the Chernobyl nuclear power plant have posed this question with new force and, I would say, in a new perspective.

The state apparatus of the United States and its dutiful mass media placed into circulation fabrications about "thousands of dead," that were supposedly photographed by American satellites. Fables were also fabricated and circulated that the entire population of Western Europe and even the United States could be harmed by radiation as a consequence of the accident. A multitude of similar versions were created by the imagination of the special services of the United States so as to heat up the international climate, divert attention from the criminal aggressive actions like the recent bombing of Libya and the undeclared wars against Afghanistan, Angola and Nicaragua, and to justify a strengthening of the arms race, the continuation of nuclear testing and the refusal to adopt peaceful Soviet initiatives.

Under the pressure of a body of facts, however, the slanderers had to retreat, to go back, as they say, on their word. The director of the American Environmental Protection Agency, L. Thomas, had to acknowledge that the number of casualties in the Chernobyl incident that was reported by the Soviets corresponded to reality.

Here is the testimony of the director of the Moscow bureau of the Japan Information Agency, T. Hamasima, who visited Kiev Oblast the other day along with other foreign journalists: "Until we came here, I was worried about my health and afraid that there was high radiation here. But on the spot I became convinced that my fears were unfounded. The fact that the radiation level is constantly decreasing speaks of the effectiveness of the measures undertaken to eliminate the consequences of the accident. It is a misfortune, of course, but people are bearing it peacefully and courageously. We encountered many people who had been evacuated. They are leading normal lives."



And this is what American Nobel Prize Laureate (R. Yalou), a scientist, has to say: "I would like to remind people that when they fly from Europe to America, they probably receive a much larger dose of radiation than the population of the environs of Kiev, not far from whom is the nuclear power plant."

The main theme of the United States attacks on the Soviet Union is accusations of the supposed intention to conceal the accident and its causes. In fact, however, everything is quite different. It was necessary, first and foremost, to evaluate what had happened on the scene and only then to give out information. As soon as this was done, on April 28 the governments of nations were already given the information possible at that moment, and reports were published by the government of the USSR almost every day. The general director of the IAEA, H. Blix, was invited to the Soviet Union, and he was given all necessary information.

Upon his return to Vienna, H. Blix announced that when he was in the USSR, he was informed in detail, in the course of candid discussions, on the state of affairs at the Chernobyl AES. "We were given the opportunity," he said, "of surveying the scene of the accident from a helicopter and verifying that the radiation level there is currently low. The invitation to visit the Soviet Union, as well as the negotiations conducted there, should be considered an extremely positive continuation of the close collaboration of the USSR and the IAEA."

Furthermore, a meeting of USSR Council of Ministers Deputy Chairman B. Ye. Shcherbina and ambassadors and temporary charges d'affaires of 15 Western states accredited to the Soviet Union took place the other day. At that meeting, detailed explanations were given on issues associated with the situation at the Chernobyl AES.

Such were the specific instances and competent objective testimony. What happened in Chernobyl proves once again what caution should be manifested in resorting to nuclear power. In the given instance, the issue is the peaceful utilization of nuclear power and the controlled nuclear aggregate. But after all, the power of the atom is also imparted to nuclear weapons, it is specially designated for mass damage and destruction. When placed in action, this power becomes uncontrollable. It is the very time to reflect seriously on this.

It is precisely for that reason that the Soviet government, having weighed the circumstances associated with the safety of our people and all of humanity, has adopted a resolution to continue its unilateral moratorium on nuclear testing to August 6 of this year, that is, up to the date when, 40 years ago, the first atomic bomb was dropped on the Japanese city of Hiroshima, which entailed hundreds of thousands of casualties. Moreover, M. S. Gorbachev confirmed his proposal to President Reagan to meet urgently in the capital of any European country or in Hiroshima and negotiate a ban on nuclear testing.

Appearing on Soviet television, M. S. Gorbachev noted that the nuclear era authoritatively requires a new approach to international relations and the joining of the efforts of the states of various social systems in the name of



halting the deadly arms race and radically improving the world political climate. Then the broad horizons of fruitful cooperation among all nations and peoples will clear. All the people of the Earth will stand to gain from this!

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## ENVIRONMENT, HEALTH

### UKRAINIAN DOCTOR GIVES IMPRESSION OF ACCIDENT

#### Part I

Moscow LITERATURNAYA GAZETA in Russian 21 May 86 p 10

[Article by LITERATURNAYA GAZETA special correspondent, Chernobyl-Kiev, under rubric "Facts, Problems, Opinions": "Chernobyl: Medical Aspect." Subrubric "An Eyewitness's Notes: Author of this article is a Ukrainian author, doctor of medical sciences, epidemiologist"; subtitle "Pain and Courage"]

[Text] Twilight was falling on Kiev. Over the Levoberezhnaya metro station the silhouette of the uncompleted hotel skyscraper was darkening. Across the street, passenger cars with their roofs gleaming were parked. The metro train was hurriedly approaching a bridge, in order to dive deep into the mountain and rumble on to Kreshchatik. The Dnepr River under the metro bridge bursting its banks from the high way, and the expanses of the river, receding into the gloom, were vast and elevated as in a Gogol story. Pairs of lovers were strolling on the embankment, people were returning to their homes -- and all these simple scenes of life in a city of many millions of people, scenes that usually do not affect us, suddenly shook me to the depth of my soul, as though something had dawned on me, as though I had suddenly become aware of some very important shift in consciousness that had occurred during recent days. This peaceful evening seemed to me to be penetratingly beautiful, as though I had said farewell forever to springtime and the city, the people unknown to me had become near and dear to me, and the everyday life of Kiev appeared in a new light.

While it was daylight, a few hours previously, I had been in Chernobyl... That which I happened to see, learn, and feel during those hot days in May 1986 changed a number of my ordinary ideas. In the face of a common misfortune that had befallen our land and had touched the very life, health, and well-organized, carefree, peaceful everyday life of many people, much of what yesterday had seemed normal and customary, or things that people simply did not notice, now seemed to be petty, empty of meaning, and sometimes even loathsome. And, contrariwise, such eternal concepts as duty, responsibility, and human decency have taken on special meaning. Properly speaking, what had occurred was something that had already occurred many times in a year of heavy

tribulations: there had been a sharp increase in the value of people's moral qualities.

In Chernobyl it was as though I had looked into the strange, improbable world of Alice's Wonderland, a world that was painted in the invisible -- and for that reason even more evil -- colors of increased radiation. I saw what was difficult to imagine even in the most fantastic dreams.

Chernobyl. A small, pretty provincial Ukrainian town, engulfed by greenery. In the summertime, many Kievans, Muscovites, and Leningraders loved to relax here. People came here to stay put, frequently for the entire summer. They came with their toddlers and family members and rented "dachas," that is, rooms in one-story wooden homes, made canned goods and jams for the winter, collected the mushrooms that grew in abundance in the local woods, got sunburned on the blindingly pure sandy banks of the Kiev Sea, and fished. And it seemed that somehow there was a harmony and inseparability between the beauty of nature in the Polesye area and the concrete-encased nuclear volcanoes of the four units of the nuclear power station that was situated very close to Chernobyl.

Today Chernobyl, a town that has attracted the attention of the entire world, is a city without residents, without the loud shouts of children, without the ordinary, everyday, typically unhurried life. The window shutters have been slammed shut, and all the homes, institutions, and stores have been closed and sealed. There does not remain the slightest sign of life. In the mornings one does not hear the cows mooing or hear any roosters or dogs. All one hears is the carefree twittering of the birds in the leaves of the trees. The birds do not know that the dust-covered leaves are the source of increased radiation.

However, Chernobyl is not dead. It still lives. But it lives according to laws that are strict and absolutely new for all of us, laws that govern the state of emergency in the nuclear age. Chernobyl is a city that is stubbornly fighting the emergency and its consequences. Armored personnel carriers and trucks with concrete dash along the streets of the city en route to the danger zone. Radiation check points are in operation, and sprinkler trucks continuously and lavishly wash the streets. A tremendous amount of equipment has been concentrated in the city and around it: mighty bulldozers and tractors, truck-mounted cranes and scrapers, all waiting their turn to go into combat. At special locations, soldiers wearing special clothing to protect them against chemicals carefully decontaminate the equipment that has come out of the danger zone. Parked in front of the rayon committee and the rayon executive committee, which are in charge of the entire operation, are dozens of passenger cars -- it looks as though an ordinary conference is in progress here. All these things, of course, are only outward signs of what is occurring in Chernobyl today, but they say a lot. There are no signs of panic. And, strangely enough, in this unusual situation, which requires the making of immediate decisions, in the contradictory and complicated hubbub of the rapidly changing emergency situation, people have begun to take a calmer and more kind-hearted attitude to one another: the common misfortune and the common goal have brought together many people who did not know one another yesterday, have made them kinder and more obliging, and have forced them to

get rid of every bit of irritability and personal pride. While in Chernobyl, I did not hear any supervisors chewing out their subordinates, or see any instances of petty interdepartmental squabbles. Everyone had a job to do, and they did it without any bureaucratic delays or prolonged coordinations.

Everyone working in the danger zone wears white and green cotton work clothing and hats. You cannot tell which person is an academician and which is a worker, which is a private and which is a general. In the face of the radioactive danger, all are equal. It is just the responsibility that is different. When you look at these people, they look like surgeons preparing to enter the operating room. The simile is quite accurate, because what is being carried out in Chernobyl today is an unprecedented operation to remove the cancerous tumor of radioactivity.

Because of my medical specialty, I happened to take part in eliminating outbursts of cholera, to conduct a number of mass measures during epidemics of various infections, to be present at the centers of plague infection, and to visit leper hospitals. At one time I wrote about this on the pages of LITERATURNAYA GAZETA. Therefore, when, as part of a group of specialists from UkSSR Ministry of Public Health, I departed for Poleskiy and Ivankovskiy rayons, which are directly adjacent to the 30-kilometer zone of increased danger, much of what I saw in the hospitals and sanitation-and-epidemiology medical aid stations at first seemed to be familiar to me: an unusually large number of medical personnel, including many who had been called in from elsewhere; courtyards jammed full of ambulances and UAZ medical vehicles bearing license plates from all the oblasts in the Ukraine; chief physician offices which mostly resembled wartime combat headquarters -- the same bivouac atmosphere, charts and diagrams with doctors leaning them, the constant ringing of telephones, thousands of matters, large and small, that had to be resolved immediately... All this was familiar and at the same time everything was new and unusual, everything was occurring for the first time: it seemed as though we had stepped over from one era -- the prenuclear era -- to an unexplored era that requires the fundamental reorganization of our way of thinking and our work methods. Fate had given us the opportunity to look beyond the edge of night, the night that will come if nuclear warheads begin to explode... If I could get my way, I would bring into the Chernobyl area as many political figures who oppose detente and I would tell them to look around, think, and make conclusions before it is too late.

The Chernobyl accident has presented to mankind a number of new problems which are not only scientific and technical, but also psychological. It is very difficult for the human mind to cope with the absurd situation in which fatal danger does not have any outward form -- no taste, color, or smell -- but is measured only by special instruments. It is as though the danger has been spilled everywhere -- in the fragrant air, in the white and pink apple blossoms, in the dust on the roads and streets, in the water of the village wells, in the milk of cows and the fresh vegetables growing in the garden plot, in the entire idyllic springtime nature. Having become intangible, the danger has intensified in some people a sense of uncertainty and fear, and in other people, on the contrary, it has caused a kind of reckless disdain: people spoke of one of these daredevils, who had decided to ignore the simplest and, one must say, rather effective methods of protecting himself,



and who had immediately paid for his "boldness." It is only objective knowledge of the real situation, knowledge that is not distorted by anyone's willfulness and that is not hidden by excessive secrecy, it is only the observance of efficient protective measures and the constant checking of the radiation level that can provide those persons who are located in the danger zone with the necessary sense of confidence.

I observed the following strange situation everywhere: the farther one got from the epicenter of events, the more uninformed, intimidated people there were, people who were ready believe any rumors. In Kiev there were more of them than in Chernobyl and the adjacent rayons; far beyond the confines of Kiev, in the southern rayons, individual self-seekers, taking advantage of the general anxiety, raised the rent on the apartments rented to Kievans, justifying this by the "increased danger."

But let us return to the rayons adjacent to the Chernobyl nuclear power station. What occurred there does not compare in any way with the events that occurred during the epidemics of the past: not by the degree of the speed with which the danger to the population increased, or the complexity of tasks confronting the medics, or the scope of the operations to move tremendous numbers of people. Imagine a motor column of a thousand motor buses with their headlights on, traveling two-abreast along the highway, carrying the many thousands of inhabitants of the city of Pripyat out of the contaminated zone -- women, old men, adults and newborn infants. Imagine those who were leaving their clean and modern city, a city that they were proud of, a city in which they had put down their roots -- construction workers and persons involved in the operation of the nuclear power station, members of their families, and everyone who, by chance or otherwise, happened to be in Pripyat. They were given an extremely limited amount of time to get their things together. They left their homes and left wearing the clothes they had on their backs, after grabbing up only the barest necessities. And some of them, in panic, did not even do that. Construction worker at the Chernobyl nuclear power station Liliya Mikhaylovna Galchenko (her husband works as an electrician there), whose family has been given a safe haven in the village of Blidcha, Ivankovskiy Rayon, told me how she left her home with her children and grandchildren without taking anything except their documents, thinking that she would be leaving the apartment for only two days. Everyone -- both the evacuees and the doctors -- unanimously assert that among those who were evacuated from Pripyat there was no panic. People were taciturn and concentrated. There were almost no tears or petty squabbles. No one tried to "bend the rules." But there was pain and anxiety in their eyes.

There was a day when the medics in Poleskiy Rayon had to accept more than 3000 persons. That is a staggering figure if one recalls the waiting lines in the clinics in ordinary "peacetime," and the workload norms that are constantly the topic of arguments. But everyone was accepted, examined, and checked with Geiger counters. And an hour later, everyone had a blood analysis, and the leucocytes were counted.

At the Ivankovskiy Rayon Hospital I visited a kind of dormitory-laboratory. It was an improvised hematology and diagnostics department, which operates round the clock, studying the blood of the evacuees and those who have asked



for medical assistance. Seated at the microscopes are pretty women from Kiev, Kharkov, and Cherkassy, and local laboratory assistants. The second shift is relaxing in the next room. Each of these women has left children at home. Each of them has her own concerns and anxieties. But these people know that they are needed here. Because this is exactly the place where the front line runs now.

While I was in the rayons which were in a state of emergency, and while I saw what a tremendous amount of work was being done by the Ukrainian medics, I frequently recalled our literary discussions about modern topics, about "rural" and "urban" prose, about the positive hero, about the need to "study" life, and about other subtleties. How scholastic and remote from this real life they seem here, when one sees unfolding before his eyes an unprecedented drama, when the essence of being a human being -- as has occurred in wartime -- is revealed in the most rapid manner: all the camouflage suddenly flies off the people like the leaves from trees that have been sprayed with defoliants -- and quiet, unremarkable workers prove to be genuine heroes, and loudmouths who, at meetings, have issued the summons to accelerate and activate the human factor, prove to be ordinary cowards. And that has indeed happened.

The faces of doctors and nurses bear the stamp of fatigue and lack of sleep. Some of them have not withstood the pressure.

But most of them have withstood it.

Immediately after UkSSR Ministry of Public Health had issued the report on the accident at the Chernobyl nuclear power station, an emergency staff was created here. It was headed at first by First Deputy Minister of Public Health A. N. Zelinskiy. At that time Minister of Public Health A. Ye. Romanenko was in the United States, and he states that he had to fight off attacks by American journalists: it would have been much easier, Anatoliy Yefimovich says, to be in Kiev... When he returned home, the minister immediately plunged into the maelstrom of the complicated matters that had to be resolved by the medics.

On the very first day of the accident, chief of the Main Administration of Preventive and Therapeutic Aid V. M. Kozlyuk and other responsible workers of Ministry of Public Health, and manager of the Kiev Oblast Public Health Department A. I. Avramenko, drove out to the rayons in Polesye, in order to organize on the spot the work of the medical institutions under the new conditions.

It was precisely during those tragic days that the doctors saw, for the first time in their lives, patients with radiation sickness... They had read about this in textbooks and had heard about it at lectures, but as for coming directly in contact with it, no, it seemed like a bad dream. But it wasn't a dream. On the very first day after the accident, patients were brought into the Poleskiy Hospital -- they were workers at the nuclear power station, and firemen who had heroically fought the accident during the first critical hours then, at night. In the eyes of my associates who were telling me about this I could see tears although, as doctors, they had seen many things. It is no easy thing to leaf through the case history of those who, fearing neither fire

nor radiation, dashed to the reactor in order to save all of us from the catastrophe that threatened us. Those patients did not stay long in Poleskiy -- only a few hours (they were sent by air to Moscow for treatment), but the medics will remember them for the rest of their lives. Those who had received severe gamma radiation included doctors who performed first-aid services for the city of Prip'yat. Seven times, disregarding the danger, doctor Pavel Nikolayevich Tynyanov went into the reactor zone in order to remove victims. He could not have done otherwise...

A large calamity has befallen us. Grief overcomes us when we think about those who gave their health and their life, in order to save other people. We bow our heads to them.

And today, while intensive work is still going on to eliminate the consequences of the accident at the Chernobyl nuclear power station, when anxiety and hope live in our hearts, it is still too early to make any global, all-encompassing conclusions. We still have to analyze the event that has shaken us. But by no means the last place (if not the first) will be occupied in that analysis by the aspects that are purely human, subjective, moral, behavioral, that is, those aspects to which literature directly pertains. However, even now it is clear that after the Chernobyl accident all of us, including the scientists and writers, will take a more demanding and stricter look at the contradictory-dialectical nature of the development of modern technical civilization.

We shall have to think carefully about how frequently we -- both scientists and writers -- were like a joyous calf looking enraptured at a new gate, instead of calmly, carefully, and objectively analyzing a complicated and multifaceted phenomenon in scientific-technical progress. I recall the hasty novels, plays, and motion pictures of certain authors, whose romantically false and elevatedly pitiful heroes, with unusual ease, labeled as reactionaries and conservatives everyone who made so bold as to express even the slightest doubt about the desirability of various scientific-technical innovations.

The Chernobyl accident has thrown light on yet another important aspect of the problem -- the role of the human factor and the moral potential of the people who have found themselves in unusual emergency conditions. No, everything was not beautiful and heroic. And this too will have to be talked about openly when the tension of the emergency operations is over. But for most of the persons whom I happened to meet during that period, the pain in their heart gave rise not to despair, but to bravery.

## Part II

Moscow LITERATURNAYA GAZETA in Russian No 23, 4 Jun 86 p 10

[Article by Yu. Shcherbak, LITERATURNAYA GAZETA special correspondent: "Alarm and Hope"]

[Text] This is the second batch of material from Ukrainian writer, doctor of medical science Yu. Shcherbak, who talks about the consequences of the accident at the Chernobyl AES. For the first of the series see "Pain and Courage. Notes of an Eyewitness." LITERATURNAYA GAZETA 21 May 1986.

The streets of Kiev are still filled with people and youth but if you look more carefully you notice that there are few children: the convoys of buses recently took most schoolchildren off for their summer vacations. The mothers were tearful, fearful, as they sent off their Oksanki's and Vasilii's to the pioneer camps...

The city has become more severe, more businesslike and much quieter than in the first days following the accident.

One of the stern lessons of the first month of the "Chernobyl era" has been taught to the mass information media: some of them have still not restructured their work in the spirit of the decisions of the 27th CPSU Congress. The fast-breaking events sharply curtailed the time needed for action and for various kinds of agreement and coordination. It is a question both of the quantity and the quality of information. After several days, when information was extremely scarce, numerous articles appeared in the newspapers and television started to relay statement by specialists. Much in those articles and statements was correct and intelligible. However...

In some publications and television broadcasts such falsely cheerful and facilely confident-sounding notes were sounded that we were literally talking not about our great common misfortune but some kind of training alarm or competition between firefighters using models.

The patriarchal nature of the ancient city spread along the hills above the Dnepr, with the gold domes of its cathedrals storing the memories of centuries, has during the last month been inscrutable, but has already been coupled with the lineament of a new age--the atomic age; and now this is no sonorous metaphor of the kind we like to repeat, but a stern reality: the words "dosimeter operator," "radiation," "reactor zone," "deactivation" and all these "milliroentgens," "rems" and "rads" and so forth have been firmly placed in our vocabulary, while the figure of a man in coveralls, his face covered by a respirator and with Geiger counter in hand, seen on the television screens, has become a commonplace. The accident at the AES has not only echoed with heartfelt pain and sympathy for those on whom this misfortune has fallen and has not only given rise to a number of scientific documents and outstanding articles by journalists but also alas! to some poor doggerel. Kiev and the Ukraine responded to the events in Chernobyl with a mighty outbreak of humor. The sharp, salty wit is particularly valued among those who have to work in the danger zone. Just as in war, the smiles and laughter are

very necessary. The jokes are for all tastes, from the popular stories in the style of Tarapunki and Shtepsel to the superrefined humor from the "the physicists laugh" series. Even in the age of television, folklore lives and develops. Myths and legends are being born before our very eyes; it sometimes seems to me that a time machine has transported me to some ancient time in Kiev, when the tireless and brilliant fantasy of its inhabitants created the poetical images of Zmey Gorynych and Nikita Kozhemyaka. One woman evacuated from Pripyat city assured me that immediately after the explosion of the reactor night turned to a day that dawned with strange plays of color, and that it became unusually hot and suddenly all the flowers and trees blossomed in that cool neck of the woods... She herself believed this fairy story and will tell it to her children and grandchildren and, who knows, perhaps it will be spread to a thousand people and in various writings see the light of day as an atomic-genetic legend of our times, the anonymous "Song of Chernobyl"...

I told this beautiful story to several young people. They laughed and shrugged their shoulders: nothing like that happened, reality is much more prosaic and ordinary. And more terrible. They may well believe this, these fellows; they were among those who on that fateful night of 26 April were working at the station, who extinguished the fire, saved the equipment, tried to preserve the life of the AES, helped their comrades. Nikolay Bondarenko, Nikolay Myagkov, Yuriy Badayev, Sergey Gazin. Russians, Ukrainians, Belorussians. Electrical fitters, turbine operators, cybernetics people. They were all united not so much by their common distress as by their youth, intellect, precise modern technical sharpness, and even more--and perhaps most of all--by their calm, undemonstrative, totally unaffected and modest heroism. Deeds, not romantic impulse.

Firefighter Leonid Shavrey from the already legendary subdivision of Lieutenant V. Pravik, stayed at his post that night on the roof of the reactor to stop the fire from spreading further. He was really hot; he even tossed his helmet aside at one point. The night was just a night, the fire just a fire; he noticed nothing supernatural. It was only when he came down that the taste of a cigarette suddenly seemed sweetly nauseating...

Fire truck driver from Chernobyl, Grigoriy Matveyevich Khmel, the senior of all these boys now charging about in the section or watching television, was wistfully looking through the window beyond which the unprecedentedly beautiful Ukrainian springtime was unfolding. Grigoriy Matveyevich is a veteran old enough to remember the Great Patriotic War and bring up two sons, Petr and Ivan. The two sons are also firefighters, and that night they too fought the fire and the radiation, just like their papa; now they are receiving medical treatment: Petr in Moscow, Ivan in Kiev. Their mother has been evacuated from a village near Pripyat and is working in Borodyanskiy rayon, where she prepares food and takes it to the vehicle operators in the field. She is very busy and so she comes infrequently. Khmel talks with his sons on the telephone.

Which of our everyday sometimes petty and pitiful problems can be compared with the drama of those people, now conducting themselves with such great human dignity?



Many of them are undergoing medical treatment at the Kiev Institute of Roentgenology, Radiology and Oncology. We do not think that we are concerned with oncology here, but the physicians in Kiev do know that patients can develop such conditions following strong irradiation.

We are walking in the department with Professor L.P. Kindzelskiy, the chief radiologist of the Ukrainian SSR Ministry of Health and the scientific leader in this clinic. We stop in front of the glass-partitioned resuscitation rooms, filled with complicated equipment. We are silent, our heads bowed in sorrow. It was here that Aleksandr Grigoryevich Lelechenko died; his exploit is today known throughout the country. Lelechenko is a tender Ukrainian word that means child of the lelek--the stork. It was here that he folded his wings. The physicians were powerless. The others survived, and today they feel much better. Some patients are nearly ready to be discharged.

It is essential that people know about this so that they do not weave black legends around radiation sickness. In fact, in connection with the accident at the AES neither rosy hues nor dark hues are permissible. What is needed is the truth.

In the early days it was difficult. The physicians and nurses in the department, among them physician B.M. Baydman, lay on tables giving their own blood for direct transfusion to the people stricken with radiation. Handling nurse A.G. Pashkovskaya is a native of Kiev. She met the chief nurse of the Kiev military hospital on that Sunday in June 1941 when "they bombed Kiev and they told us that the war had started." She spent the entire war with him, working in the surgical department. She has delicate hands; no one can find a vein better than she can, and with her you do not even feel the prick. When the first group of patients with radiation sickness arrived, Anastasiy Gordeyevna was reminded of the sad days of the war, the young wounded soliders, their frightened glances... "I was sick at heart when I saw the lads from Pripyat," she says. "I did not believe such a thing could happen. But I did not show it. On the contrary, I tried to give reassurance to the young fellows. For we must keep hoping..."

Hundreds of thousands of people all over the country are now trying to help those who suffered in the accident, some with a kind word, some with money, some with their own blood and bone marrow. I wear a white coat and a gauze mask like a hood, with a slit for the eyes. Various surgical sounds are to be heard. In the surgical wing of the Kiev city blood transfusion station I watch a donor giving bone marrow. I have never seen this kind of operation; I had thought that the procedure was uncommon, complicated and mysterious. It turns out that everything is much simpler: a "Kassirskiy needle" is inserted into the donor's breast bone under anesthesia and the pinkish matter is pumped into a syringe. At one time people used to think that the breast bone was the location of the soul. They were not far from the truth. The sternum is the core of the blood-forming system, its main production force, so essential now for those suffering from radiation sickness. The donor is young, dark and compact. He makes no sound as he lies there with his teeth clenched. We spoke with him several minutes before the operation.

He is a Cuban. His name is Raul Rodriguez. He is a student at the Kiev institute for civil aviation engineers. A likeable, smiling lad, a fighter. In the early days following the Chernobyl accident he went to the blood transfusion station and offered his help. It was needed. This lad somehow



reminded me of the fellows from the AES: the same quiet courage and shyness. His father Alfredo (who died some years ago) and his mother, Sofia Marsel, who works in a tobacco factory, are communists. His father took part in Fidel Castro's revolutionary movement. Raul Rodriguez is also a communist. He told me that 50 young Cubans studying in Kiev resolved to give blood immediately for the blood bank to help the victims of the accident. I would very much like this fine young man to be known not just by the people here in our country. Cuba and Fidel Castro can be proud of their sons...

Here in the hospitals of Kiev, hope is not perceived as something diffuse and abstract; it acquires concrete form. It is expressed by exact numbers of leukocytes and thrombocytes, percentages of hemoglobin and other real things that a person needs...

The echo of Chernobyl has now been resounding for more than a month. Thousands of people have been evacuated, hundreds of medical teams are working. Behind every such statistic stand living people, torn up as if by a hurricane from a regular life that they have enjoyed for years, now with complicated problems, long separations, and difficult labor. My notebooks are filled with hundreds of names; the chief physicians ask that the best be listed, that we are not miserly with the names, so that no one will be offended, no one forgotten. But how can I do this in a newspaper article?

In a few days from now we shall be celebrating the physicians' professional holiday--Medical Workers' Day. There is no doubt that the best names will be sounded out on that day. I remember June 1985, when medical people from the capital and the oblast gathered in the best hall in Kiev--the Ukraina palace; happy, smart people who could not yet see what was waiting for them a year later... Exultant speeches were made and repeated references were made to keeping the Hippocratic oath. Well, today it can be said that most have kept that oath.

My friend, that wonderful poet Ivan Drach long ago wrote some verse entitled "The Legend of Polessk": the Pripyat River engages in dialogue with the birds and fishes, who are complaining in alarm about their nuclear neighbor. The river explains that "The atomic castle is being made from steel, and after ten years it will be raised up on unshakable atomic thrones all over the world."

The poetic fantasy is now in conflict with the technological reality. And already I. Drach's son, the medical student Maksim, one of the heroes of my story "The Little Soccer Team," has spent several days working without a break as a dosimeter operator during the evacuation of the population from Chernobyl. Ahead lie his examinations. But he has already passed with flying colors his first and most important examination in civic maturity.

Alarm and hope... These are what we all lived with in this hot, incredible month of May 1986. We lived in alarm for our lives and for the health of the people who experienced for themselves the force and the insidiousness of the radiation. We lived with hope for humankind, for his intelligence, his kindness and charity, his heroism and decency.

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